



**Education-Psychology
Building Envelope Repairs**

**Attachment A
PROJECT MANUAL
ITB #2026-03**



February 27, 2026

Southern Oregon University
Facilities Management & Planning
351 Walker Avenue • Ashland, Oregon 97520
Phone 541-552-6231
Email mcnamaraj@sou.edu

SOUTHERN OREGON UNIVERSITY
ED-PSYCH - BUILDING ENVELOPE REPAIRS
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**SOUTHERN OREGON UNIVERSITY
STANDARD PUBLIC IMPROVEMENT CONTRACT**

**INVITATION TO BID
Education-Psychology
Building Envelope Repairs
ITB #2026-03**

Bids will be received by the **Southern Oregon University (SOU) Service Center, Computer Services Center-West Wing-2nd Floor, 1250 Siskiyou Boulevard, Ashland, Oregon** until **3:00 PM** local time **March 19, 2026** for the **Education-Psychology (Ed-Psych) Building Envelope Repairs** project. The Ed-Psych building is located at 370 South Mountain Avenue on the SOU campus in Ashland, Oregon.

This project includes all labor, materials and equipment to complete (3) separate work scopes:

Membrane Roof Replacement (approx. 9,500 square feet)

- Remove and recycle the existing membrane roofing
- Install ¼” densdeck underlayment
- Install 60 mil mechanically fastened PVC membrane roof (20 year-NDL warranty)
- Salvage and re-install metal flashings and parapet copings

Patio Deck Repair & Waterproofing (approx. 1,600 square feet)

- Demolish existing topping slabs and hot-mopped waterproofing at (3) patio decks.
- Install new drain assemblies and overflow drains
- Pour new sloped topping slabs
- Install PUMA deck coating system
- Install new standing-seam metal roofing over existing brick
- Install new sheet metal downspouts

Replace (5) exterior door assemblies

- Demolish existing doors, frames & glazing
- Install new galvanized HM frames, doors, insulated safety glass, and hardware
- Provide painting, sealants, and re-connection of existing access controls

Bid Bonds are not required for this project. **Performance and Payment bonds are required.**

A **mandatory** pre-bid conference will be held on **Friday March 6, 2026, 11:30AM** at the Ed-Psych building, 370 South Mountain Ave., Ashland, OR. Meet at the south (main) building entry. A representative for each prime bidder is required to attend.

SOU will procure and pay directly for any required City of Ashland permits.

All work is to be completed between July 6, 2026 – August 31, 2026.

Bids will be received on a lump sum basis. Bids must be submitted on the enclosed bid form and will be opened and publicly read aloud on **March 19, 2026 at 3:00 PM**, local time, at the **SOU Service Center, Computer Services Center -West Wing, 2nd Floor, 1250 Siskiyou Boulevard, Ashland, Oregon** by the undersigned or a designated representative.

The prime bidder and all subcontractors must be currently licensed to practice in each of their respective areas of expertise by the State of Oregon Construction Contractor's Board (CCB). The prime bidder shall have the required Public Works Bond on file with the CCB prior to submitting a bid. Failure

to be registered and have the bond in place will result in the rejection of your bid as non-responsive. All subcontractors must file a Public Works Bond with the CCB prior to starting work on the project, unless exempt.

Oregon Bureau of Labor and Industries (BOLI) wage rates (ORS 279C.800 through ORS 279C.870) apply to this project. See SOU General Conditions, Sections C.1 and C.2, regarding wage rate compliance and payroll certification requirements. Workers shall be paid the applicable prevailing wage rates in accordance with ORS 279.838 and 279C.840. Oregon BOLI Prevailing Wage Rates per the January 5, 2026 and including the February 18, 2026 amendment apply to this project.

Prevailing wage rates are available at <http://www.oregon.gov/BOLI>. If a contractor fails to pay for labor or services, SOU can pay and withhold these amounts from payments due the Contractor (ORS 279C.5.15). The Contractor and their subcontractors shall provide a written schedule to employees showing the number of hours per day and days per week the employee may be required to work (ORS 279C.520). The Contractor and their subcontractors must promptly pay for any medical services they have agreed to pay (ORS 279C.530).

Bid documents may be obtained from the SOU Procurement portal:
<https://sou.bonfirehub.com/portal/?tab=openOpportunities>
or the Oregon Public Universities website: <https://secure.orpu.org/bid> .

SOUTHERN OREGON UNIVERSITY

By: Jim McNamara
Capital Projects Manager
SOU Facilities Management and Planning

SOUTHERN OREGON UNIVERSITY
STANDARD PUBLIC IMPROVEMENT CONTRACT

BID FORM – ITB 2026-3

OWNER: **Southern Oregon University**
PROJECT: **Education-Psychology Building Envelope Repairs**
BID CLOSING: **March 19, 2026, 3:00 PM Local Time**
BID OPENING: **March 19, 2026, 3:00 PM Local Time**

FROM: _____
Name of Contractor

TO: **Southern Oregon University**
Facilities Management and Planning
351 Walker Avenue
Ashland, Oregon 97520

1. The Undersigned (*check one of the following and insert information requested*):

_____ a. An individual doing business under an assumed name registered under the laws of the State of _____; or

_____ b. A partnership registered under the laws of the State of _____;

or

_____ c. A corporation organized under the laws of the State of _____; or

_____ d. A limited liability corporation organized under the laws of the State of _____;

hereby proposes to furnish all material and labor and perform all work hereinafter indicated for the above project in strict accordance with the Contract Documents for the as follows:

2. Bid for all work as described in the plans and specifications:
Education-Psychology Building Envelope Repairs (ITB 2026-3)

BASE BID: Perform all work per Specifications (Attachment A) and Drawings (Attachment B)

LUMP SUM: (\$ _____)

Lump Sum in Words: _____

and the Undersigned agrees to be bound by the following documents:

- Invitation for Bids (ITB 2026-3)
- Attachment A – Project Manual
- Attachment B - Drawings
- Oregon BOLI Wage Rates

ADDENDA numbered ____ through ____, inclusive (*fill in blanks*)

3. All work shall be completed by the dates shown in ITB 2026-3.

4. The Undersigned certifies that: (1) This Bid has been arrived at independently and is being submitted without collusion with and without any agreement, understanding, or planned common course of action with any other vendor of materials, supplies, equipment or services described in the invitation to bid designed to limit independent bidding or competition; and (2) The contents of the Bid have not been communicated by the Undersigned or its employees or agents to any person not an employee or agent or its surety on any bond furnished with this bid and will not be communicated to such person prior to the official opening of the Bid.

5. The undersigned **HAS, HAS NOT** (*circle applicable status*) paid unemployment or income taxes in Oregon within the past 12 months and **HAS, HAS NOT** (*circle applicable status*) a business address in Oregon.

6. The Undersigned agrees, if awarded a contract, to comply with the provisions of ORS 279C.800 through 279C.870 pertaining to the payment of the prevailing rates of wage if the bid exceeds \$50,000.00.

7. Contractor's CCB registration number is _____. As a condition to submitting a bid, a Contractor must be registered with the Oregon Construction Contractors Board in accordance with ORS 701.035 to 701.055, and disclose the registration number. Failure to register and disclose the number will make the bid unresponsive and it will be rejected, unless contrary to federal law.

8. The successful Bidder hereby certifies that all subcontractors who will perform construction work as described in ORS 701.005(2) were registered with the Construction Contractors Board in accordance with ORS 701.035 to 701.055 at the time the subcontractor(s) made a bid to work under the contract.

9. The successful Bidder hereby certifies that, in compliance with the Worker's Compensation Law of the State of Oregon, its Worker's Compensation Insurance provider is _____, Policy No. _____, and that Contractor shall submit Certificates of Insurance as required.

10. Contractor's Project Manager for this project is: _____,
Office Phone: _____ Cell Phone: _____.

11. Bidder Certification: By signature on this Bid Form the undersigned certifies that they are authorized to act on behalf of the Entity and that under penalty of perjury the undersigned will comply with the following:

SECTION I. OREGON TAX LAWS

As required in ORS 305.385(6) the undersigned hereby certifies that to the best of the undersigned's knowledge, the Entity is not in violation of any Oregon Tax Laws. For purposes of this certification, "Oregon Tax Laws" means a state tax imposed by ORS 403.200 to 403.250 (Tax For Emergency Communications), 118 (Inheritance Tax), 314 (Income Tax), 316 (Personal Income Tax), 317 (Corporation Excise Tax), 318 (Corporation Income Tax), 320 (Amusement Device and Transient Lodging Taxes), 321 (Timber And Forestland Tax), 323 (Cigarettes And Tobacco Products Tax), and any local taxes administered by the Department of Revenue under ORS 305.620. If a Contract is executed, this information will be reported to the Internal Revenue Service under the name and taxpayer I.D. number submitted below. Information not matching IRS records could subject Contractor to 31 percent backup withholding.

SECTION II. AFFIRMATIVE ACTION

The undersigned hereby certifies that they have not discriminated against Minority, Women or Emerging Small Business Enterprises in obtaining any required subcontracts, pursuant to SOU's Procurement and Contracting Code (FAD.057 (580-061)).

SECTION III. COMPLIANCE WITH SOLICITATION

The undersigned agrees and certifies that they:

1. Have read, understand, and agree to be bound by and comply with all requirements, instructions, specifications, terms and conditions contained herein (including any attachments); and
2. Are an authorized representative of the Entity, that the information provided is true and accurate, and that providing incorrect or incomplete information may be cause for rejection of the offer or contract termination; and
3. Will furnish the designated item(s) and/or service(s) in accordance with the solicitation and the contract; and
4. Will provide/furnish federal employee identification number or social security number with offer.

Minority, Women & Emerging Small Business (MWESB) Certified Firm: Yes No

If yes, Minority, Women & Emerging Small Business (MWESB) Certification Number: _____

By signature below, Contractor agrees to be bound by this Bid.

NAME OF FIRM _____

ADDRESS _____

FEDERAL TAX ID _____

TELEPHONE NO _____

EMAIL _____

SIGNATURE 1) _____

Sole Individual

or 2) _____

Partner

or 3) _____

Authorized Officer of Corporation or LLC

PRINTED NAME _____

Print Name and Title of Contractor Signatory

Payment information will be reported to the IRS under the name and taxpayer ID # provided above. Information not matching IRS records could subject Contractor to 31 percent backup withholding.

******* END OF BID *******

**SOUTHERN OREGON UNIVERSITY
FIRST-TIER SUBCONTRACTOR DISCLOSURE FORM**

This form must be submitted at the location specified in the Invitation to Bid within two (2) working hours after the date and time of the deadline when the bids are due.

List below the name of each subcontractor that will be furnishing labor or labor and materials and that is required to be disclosed by ORS 279C.370, the dollar value of the subcontract and the category of work that the subcontractor will be performing.

*Enter “**NONE**” if there are no subcontractors that need to be disclosed.
(ATTACH ADDITIONAL SHEETS IF NEEDED)*

Project Name: SOU Ed-Psych Building Envelope Repairs (ITB 2026-3)

Bid Closing Date: March 19, 2026. Time: 3:00 PM

SUBCONTRACTOR NAME (Please Print)	DOLLAR VALUE	CATEGORY/DIVISION OF WORK (Painting, electrical, landscaping, etc.)
Name	\$	
Name	\$	
Name	\$	
Name	\$	
Name	\$	
Name	\$	
Name	\$	
Name	\$	
Name	\$	
Name	\$	
Name	\$	
Name	\$	

**Failure to submit this form within 2 hours of the bid closing will result in a non-responsive bid.
A non-responsive bid will not be considered for award.**

Form submitted by (Bidders Name): _____

Contact Name: _____ Phone No.: _____

SOUTHERN OREGON UNIVERSITY PUBLIC IMPROVEMENT AGREEMENT FORM

This Agreement for the (Insert Project Name) (the "Contract"), made by SOUTHERN OREGON UNIVERSITY, hereinafter called OWNER, and (Insert Contractor's Name) hereinafter called the CONTRACTOR (collectively the "Parties"), shall become effective on (Insert contract award date), or the date this Contract has been signed by all the Parties.

WITNESSETH:

1. Contract Price, Contract Documents and Work.

The CONTRACTOR, in consideration of the sum of _____ (the "Contract Price"), to be paid to the CONTRACTOR by OWNER in the manner and at the time hereinafter provided, and subject to the terms and conditions provided for in the Instructions to Bidders and other Contract Documents (as defined in the SOU General Conditions referenced within the Instructions to Bidders), all of which are incorporated herein by reference, hereby agrees to perform all Work described and reasonably inferred from the Contract Documents. The Contract Price is the amount contemplated by the Base Bid adjusted for Alternates [Identify accepted Alternates], as indicated in the accepted Bid.

Also, the following documents are incorporated by reference in this Contract and made a part hereof if checked for inclusion [X]:

[] (RESERVED)

2. Representatives.

CONTRACTOR has named (Insert Name) its' Authorized Representative to act on its behalf. OWNER designates, or shall designate, its Authorized Representative as indicted below (check one):

[] Unless otherwise specified in the Contract Documents, the OWNER designates (Insert Name) as its Authorized Representative in the administration of this Contract. The above-named individual shall be the initial point of contact for matters related to Contract performance, payment, authorization, and to carry out the responsibilities of the OWNER.

[] Name of OWNER'S Authorized Representative shall be submitted by OWNER in a separate writing.

3. Key Persons.

The CONTRACTOR'S personnel identified below shall be considered Key Persons and shall not be replaced during the project without the written permission of Owner, which shall not be unreasonably withheld. If the CONTRACTOR intends to substitute personnel, a request must be given to Owner at least 30 days prior to the intended time of substitution. When replacements have been approved

by Owner, the CONTRACTOR shall provide a transition period of at least 10 working days during which the original and replacement personnel shall be working on the project concurrently. Once a replacement for any of these staff members is authorized, further replacement shall not occur without the written permission of Owner. The CONTRACTOR’S project staff shall consist of the following personnel:

Project Manager: _____ shall be the CONTRACTOR’S project manager and will participate in all meetings throughout the project term.

Job Superintendent: _____ shall be the CONTRACTOR’S on-site job superintendent throughout the project term.

4. Contract Dates.

COMMENCEMENT DATE: Within **(Insert # of Days)** Days of the Notice to Proceed.

SUBSTANTIAL COMPLETION DATE: **(Insert # of Days)** from “Notice to Proceed” **(or a date certain)**.

FINAL COMPLETION DATE: **(Insert # of Days)** from “Notice to Proceed” **(or a date certain)**.

5. Tax Compliance.

The individual signing on behalf of CONTRACTOR hereby certifies and swears under penalty of perjury that s/he is authorized to act on behalf of CONTRACTOR s/he has authority and knowledge regarding CONTRACTOR’S payment of taxes, and to the best of her/his knowledge, CONTRACTOR is not in violation of any Oregon tax laws. For purposes of this certification, "tax" means those programs listed in ORS 305.380(4). For purposes of this certification, “tax laws” means a state tax imposed by ORS 401.792 to 401.816 and ORS chapters 118, 314, 316, 317, 318, 320, 321 and 323; the elderly rental assistance program under ORS 310.630 to 310.706; and local taxes administered by the Department of Revenue under ORS 305.620.

6. Integration

The Contract documents constitute the entire agreement between the parties. There are no other understandings, agreements or representations, oral or written, not specified herein regarding this Contract. CONTRACTOR, by the signature below of its authorized representative, hereby acknowledges that it has read this Contract, understands it, and agrees to be bound by its terms and conditions.

In witness whereof, Southern Oregon University executes this Contract and the CONTRACTOR does execute the same as of the day and year first above written.

CONTRACTOR DATA:
(Insert Contractor Name & Address)

CONTRACTOR NAME _____

CONTRACTOR FEDERAL TAX ID # _____
CONTRACTOR CCB # _____ Expiration Date: _____

[Payment information will be reported to the IRS under the name and taxpayer ID # provided above. Information must be provided prior to contract approval. Information not matching IRS records could subject Contractor to 31 percent backup withholding.]

CONTRACTOR SIGNATURE

By _____
Signature Date

Print Name Title

SOUTHERN OREGON UNIVERSITY

By _____
Name/Title Date

By _____
Name/Title Date

**SOUTHERN OREGON UNIVERSITY
STANDARD CONTRACT PROVISIONS**

1. **ACCESS TO RECORDS.** Contractor will maintain records, sufficient to accurately document its performance of this Contract. University will have access to such records of Contractor for the purpose of determining compliance with this Contract. Contractor will retain all such records, for a minimum of six years following final payment under or termination of this Contract, or such longer period as may be required by applicable law or to conclude any audit, review, or controversy.

2. **INDEMNITY FOR INFRINGEMENT CLAIMS.** EXCEPT TO THE EXTENT ARISING FROM MATERIALS PROVIDED TO CONTRACTOR BY UNIVERSITY, WHICH MATERIALS ARE UTILIZED BY CONTRACTOR IN THEIR UNALTERED FORM AND WITHOUT LIMITING THE GENERALITY OF THE INDEMNIFICATION CLAUSE REFERENCED IN THE HOLD HARMLESS SECTION BELOW, CONTRACTOR EXPRESSLY AGREES TO INDEMNIFY AND HOLD HARMLESS UNIVERSITY AND ITS GOVERNING BOARD, DIRECTORS, OFFICERS, EMPLOYEES, AND AGENTS FROM AND AGAINST ANY AND ALL CLAIMS, SUITS, ACTIONS, LOSSES, LIABILITIES, COSTS, EXPENSES, AND DAMAGES ARISING OUT OF OR RELATED TO ANY CLAIMS THAT THE DELIVERABLES INFRINGE ANY PATENT, COPYRIGHT, TRADE SECRET, TRADEMARK, TRADE DRESS, MASK WORK, UTILITY DESIGN, OR OTHER PROPRIETARY RIGHT OF ANY THIRD PARTY. The indemnity under this Section will not apply to the extent such alleged or actual infringement arises as a result of (i) modifications of such work made by University which were not approved by Contractor, or (ii) Contractor's compliance with any of University's designs, specifications or instructions. In the event that a court of competent jurisdiction determines in a final, non-appealable order that the work is infringing in a manner for which Contractor is obligated to indemnify University pursuant to this Section, Contractor will, at its option, (1) procure for University the right to continue using such infringing work; (2) replace the infringing work with a non-infringing item of like form, fit or function; or (3) modify the work so that it no longer infringes.

3. **HOLD HARMLESS.** Contractor will be responsible for all damage to property, injury to persons, and loss, expense, inconvenience, and delay which may be caused by, or result from any act or omission of Contractor, its subcontractors, agents, or employees. Contractor will indemnify and hold harmless University, its governing board and their directors, officers, agents, employees, and members from all claims, suits, and actions of any nature resulting from or arising out of the acts or omissions of Contractor or its subcontractors, officers, agents, or employees.

4. **INSURANCE.** Contractor shall secure at its own expense and keep in effect during the term of the Contract either comprehensive general liability insurance with broad form CGL endorsement or commercial general liability insurance with a minimum limit of \$2,000,000 per occurrence and auto liability insurance with a minimum limit of \$2,000,000 per occurrence, each with annual aggregate limit of \$4,000,000. Insurance policies, which cannot be excess to a self-insurance program, are to be issued by an insurance company authorized to do business in the State of Oregon. Southern Oregon University, and its governing board, officers and employees shall be included as an additional insured in said insurance

policy. If any of the liability insurance is arranged on a "claims made basis," then "tail" coverage will be required at the completion of the Contract for duration of twenty-four (24) months. University may require that the Contractor furnish the University with certificate(s) of insurance as evidence of insurance coverage before commencing work under the Contract.

5. **INDEPENDENT CONTRACTOR STATUS.** The services to be rendered under this Contract are those of an independent contractor. Contractor is not to be considered an agent or employee of University for any purpose, and neither Contractor nor any of Contractor's agents or employees are entitled to any of the benefits that University provides for its employees. Nothing in this Contract will be construed to create a partnership, joint venture, franchise, agency, or employment relationship between the Parties. Notwithstanding the generality of the foregoing and for the avoidance of doubt, Contractor will not be working under the direction and control of University, and this Contract is non-exclusive for both parties.

6. **OWNERSHIP OF WORK PRODUCT.** All work product of Contractor that results from this Contract ("Work Product") is the exclusive property of University. University and Contractor intend that such Work Product be deemed "work made for hire" of which University will be deemed the author. If for any reason the Work Product is not deemed "work made for hire," Contractor by this Contract irrevocably assigns to University all its right, title, and interest in and to any and all of the Work Product, whether arising from copyright, patent, trademark, trade secret, or any other state or federal intellectual property law or doctrine. Contractor will execute such further documents and instruments as University may reasonably request in order to fully vest such rights in University. Contractor forever waives any and all rights relating to the Work Product, including without limitation, any and all rights arising under 17 USC 106A or any other rights of identification of authorship or rights of approval, restriction or limitation on use or subsequent modifications.

7. **REPRESENTATIONS AND WARRANTIES.** Contractor represents and warrants that (1) Contractor has the power and authority to enter into and perform this Contract; (2) The individual signing for Contractor is authorized to execute this Contract on behalf of Contractor; (3) This Contract, when executed and delivered, will be a valid and binding obligation of Contractor, enforceable in accordance with its terms; (4) The work under this Contract will be performed in a good and workmanlike manner and in accordance with the highest professional standards; (5) Contractor will, at all times during the term of this Contract, be qualified, professionally competent, and duly licensed to perform the work; and (6) Contractor's name, as it appears in this Contract, is Contractor's legal name, as it will appear in the Contractor's W-9, and if Contractor is an entity rather than an individual that the entity named in this Contract is validly existing and in good standing. The warranties set forth in this Section are in addition to, and not in lieu of, any other warranties provided.

8. **EQUAL EMPLOYMENT OPPORTUNITY NOTICES.** This contractor and subcontractor shall abide by the requirements of 41 CFR §§60-1.4(a), 60-300.5(a) and 60-741.5(a), which are incorporated by reference. These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities, and prohibit discrimination against all individuals based on their race, color, religion, sex, or national origin. Moreover, these regulations require that covered prime contractors and subcontractors take affirmative action to employ and advance in employment qualified

individuals without regard to race, color, religion, sex, national origin, protected veteran status or disability.

9. TERMINATION. (a) This Contract may be terminated at any time by mutual written consent of both Parties.

(b) University may at its sole discretion terminate this Contract in whole or in part upon 30-days' written notice to Contractor.

(c) University may terminate this Contract effective upon delivery of written notice to Contractor, or at such later date as may be established by University if: (i) federal or state laws, rules, regulations, or guidelines are modified or interpreted in such a way that any Deliverables or services to be provided by Contractor under this Contract are no longer allowable or appropriate for purchase by University or are no longer eligible for the funding proposed for payment authorized by this Contract; (ii) any license or certificate required by law or regulation to be held by Contractor to provide Deliverables under this Contract is denied, revoked, or not renewed for any reason; (iii) if Contractor becomes insolvent or admits in writing its inability to pay its debts as they mature, or makes an assignment for the benefit of creditors; (iv) if a petition under any foreign, state, or United States bankruptcy act, receivership statute, or the like, as they now exist, or as they may be amended, is filed by Contractor; or (v) if such a petition is filed by any third party, or an application for a receiver is made by anyone and such petition or application is not resolved favorably to Contractor within ninety (90) calendar days. (d) University may terminate by written notice of default (including breach of contract) to Contractor the whole or any part of this Agreement if: (i) Contractor fails to provide services called for by this Agreement within the time specified in this Agreement or any extension of this Agreement; or (ii) Contractor fails to perform any of the other provisions of this Agreement, or fails to pursue the Work so as to endanger performance of this Agreement in accordance with its term and, after receipt of written notice from University, fails to correct such failures within 10 days or such longer period as University may determine at University's sole discretion. In addition to the right to terminate, in the event of a default by Contractor under this section, University will have all other rights and remedies at law or in equity.

10. TERMINATION DUE TO NON- APPROPRIATION OF FUNDS. University may terminate this Contract upon written notice to Contractor if it has not: (a) Received from the Oregon Legislative Assembly appropriations, limitations or expenditure authority, or (b) Received allotments from the Higher Education Coordinating Commission or allotments pursuant to ORS Chapter 291, sufficient to allow University, in the exercise of its reasonable administrative discretion, to pay the amounts of this Contract.

11. REMEDIES. (a) In the event of termination pursuant to Section 9(b), 9(c)(i), or 10, Contractor's sole remedy will be a claim for the sum designated for accomplishing the work multiplied by the percentage of work completed and accepted by University, less previous amounts paid and any claim(s) which University has against Contractor. If previous amounts paid to Contractor exceed the amount due to Contractor under this subsection, Contractor will pay any excess to University upon demand. (b) In the event of termination pursuant to Sections 9(c)(ii) or (d), University will have any remedy available to it in law or equity. If it is determined for any reason that Contractor was not in default under these subsections, the rights and obligations of the Parties will be the same as if the Contract was terminated pursuant to Section 9(b). (c) Upon receiving a notice of termination of this Contract, Contractor will immediately cease all activities under this Contract, unless University expressly directs otherwise in writing. Upon termination, Contractor will deliver to orientation, status as a veteran, or handicap.

University all Work Product, documents, information, works-in-progress and other materials that are or would be deliverables or otherwise the property of University had the Contract been completed. Upon University's request, Contractor will surrender to anyone University designates, all documents, research or objects or other tangible things needed to complete the work.

12. SUBCONTRACTS AND ASSIGNMENTS.

Notwithstanding anything in Sections 3, 8, or any other reference to subcontractors in this Contract, Contractor will not subcontract, assign, or transfer any of its interest in this Contract without obtaining prior written approval from University, which consent may be withheld by University in its discretion. As a condition to requesting prior written approval, Contractor must provide a written copy of any such proposed assignment or subcontract to University. University's consent to any assignment or subcontract will not relieve Contractor of any of its duties or obligations under this Contract. Any assignment or subcontract in contravention of this Section will be null and void.

13. CONFLICT OF INTEREST. Contractor covenants that it presently has no interest and will not acquire any interest, direct or indirect, which would conflict in any manner with or prohibit Contractor's full performance of this Contract. Contractor also covenants that in the performance of this Contract no person having any such interest will be employed. Contractor further covenants that its performance of this Contract will not cause any employee or volunteer of University to violate ORS Chapter 244.

14. LIMITATION OF LIABILITIES. UNIVERSITY WILL NOT BE LIABLE FOR (i) ANY INDIRECT, INCIDENTAL, CONSEQUENTIAL, OR SPECIAL DAMAGES UNDER THIS CONTRACT, OR (ii) ANY DAMAGES OF ANY SORT ARISING SOLELY FROM THE TERMINATION OF THIS CONTRACT IN ACCORDANCE WITH ITS TERMS.

15. WARRANTIES. Unless otherwise stated, all equipment shall be new and current models and shall carry full factory warranties. Contractor warrants all goods delivered to be free from defects in labor, material, and manufacture and to be in compliance with bid specifications. All implied or express warranty provisions of the Uniform Commercial Code (ORS, Chapter 72) are incorporated in this Contract. All warranties shall run to the State.

16. NOTICES. Except as otherwise expressly provided in this Contract, any communications between the Parties or notices to be given under this Contract will be given in writing by personal delivery, facsimile, or mailing the same, postage prepaid, to Contractor or University at the address or number set forth on the first page of this Contract, or to such other addresses or numbers as the Parties may from time to time direct in writing. Any communication or notice so addressed and mailed will be deemed to be given five days after mailing. Any communication or notice delivered by facsimile will be deemed to be given when receipt of the transmission is generated by the transmitting machine. To be effective against University, such facsimile transmission must be confirmed by telephone notice to University's supervising representative. Any communication or notice by personal delivery will be deemed to be given when actually delivered.

17. CAPTIONS. The captions or headings in this Contract are for convenience only and in no way affect the meaning or interpretation of this Contract.

18. COMPLIANCE WITH APPLICABLE LAW. Contractor will comply with all applicable federal, state, and local laws, ordinances, regulations, and University policies. Contractor also agrees to comply with all applicable laws prohibiting discrimination on the basis of race, sex, national origin, religion, age, sexual

- 19. WORKERS' COMPENSATION.** Contractor, its subcontractors, if any, and all employers providing work, labor, or materials under this Contract are subject employers under the Oregon Workers' Compensation Law, and shall either comply with ORS 656.017, which requires said employers to provide workers' compensation coverage that satisfies Oregon law for all their subject workers, or shall comply with the exemption set out in 656.126.
- 20. GOVERNING LAW; JURISDICTION; VENUE.** This Contract will be governed and construed in accordance with the laws of the State of Oregon without regard to principles of conflicts of law. Any claim, action, or suit between University and Contractor will be brought and conducted solely and exclusively within a Circuit Court located in Jackson County, Oregon. However, if any claim, action, or suit must be brought in a federal forum, it will be brought and conducted exclusively in the United States District Court for the District of Oregon. In no event will any part of this Contract be construed as a waiver by University of its sovereign and governmental immunities. BY EXECUTION OF THIS CONTRACT, CONTRACTOR CONSENTS TO IN PERSONAM JURISDICTION OF SUCH COURTS.
- 21. ATTORNEY FEES.** In the event a lawsuit of any kind is instituted on behalf of the University to collect any payment due or to obtain performance of any kind under this Contract, Contractor shall pay such additional sums as the court may adjudge as reasonable attorney fees plus all costs and disbursements at trial and on any appeal.
- 22. PAYMENT.** Payment for completion of State of Oregon public university contracts is normally made within 30 days following the date the entire order is delivered and accepted or the date the invoice is received, whichever is later. After 45 days, Contractor may assess overdue account charges up to a maximum rate of two-thirds of one percent per month on the outstanding balance (ORS 293.462).
- 23. RECYCLED PRODUCTS.** Unless expressly otherwise provided for in this Contract, all paper products will be sourced from mills using elemental chlorine-free processes and contain a minimum of 30% post-consumer waste.
- 24. HAZARD COMMUNICATION.** Contractor will notify University prior to using products containing hazardous chemicals to which University employees may be exposed. Products containing hazardous chemicals are those products defined by Oregon Administrative Rules Chapter 437.
- 25. SAFETY AND HEALTH REQUIREMENTS.** Equipment and services supplied shall comply with all federal Occupational Safety and Health Administration (OSHA) requirements and with all Oregon safety and health requirements including those of the State Workers' Compensation Department.
- 26. DELIVERY.** All deliveries shall be F.O.B. destination with all transportation and handling charges paid by Contractor. Responsibility for loss or damage shall remain with Contractor until final inspection and acceptance when responsibility shall pass to the University except as to latent defects, fraud, and Contractor's warranty obligations.
- 27. INSPECTIONS.** Goods furnished under this Contract shall be subject to inspection and test by the University at times and places determined by it. If it finds goods furnished to be incomplete or not in compliance with bid specifications, the University may reject the goods and require Contractor to either correct them without charge or deliver them at a reduced price. If Contractor is unable or refuses to correct such goods within a time deemed reasonable by the University, the University may cancel the order in whole or in part.
- 28. SURVIVAL.** All provisions of this Contract that would reasonably be expected to survive its termination will do so.
- 29. SEVERABILITY.** If any term or provision of this Contract is declared by a court of competent jurisdiction to be illegal or in conflict with law, the validity of the remaining terms and provisions will not be affected. The Parties agree to attempt to substitute for any illegal or unenforceable provision a valid one that achieves the economic, legal and commercial objectives of the unenforceable provision to the greatest extent possible.
- 30. SUCCESSORS IN INTEREST.** This Contract will be binding upon and will inure to the benefit of the Parties, and their respective successors and assigns.
- 31. ECONOMIC OPPORTUNITIES.** Contractor will, when applicable, have made good faith efforts to work with or obtain materials to be used in performing the Contract from minority-owned, women-owned, and emerging small business enterprises.
- 32. FOREIGN CORRUPT PRACTICES.** Contractor shall comply with all applicable laws relating to anti-corruption or anti-bribery, including, but not limited to, the requirements of the Foreign Corrupt Practices Act of 1977, as amended, (FCPA) (15 U.S.C. §§78dd-1, et. seq.), regardless of whether contractor is within the jurisdiction of the United States. Contractor shall not, either directly or indirectly, pay, offer, give, or promise to pay or give, any portion of monies or anything of value received from the University to a public official or any person in violation of the FCPA and/or in violation of any applicable local laws relating to anti-corruption or anti-bribery.
- 33. FEDERAL PROVISIONS.** If this Contract is federally funded in whole or in part, Contractor must comply with all applicable provisions of the Office of Management and Budget's Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards. Further, if Federal Funding Accountability and Transparency Act (FFATA) applies, Contractor is required to submit certain information to University. If Contractor fails to timely submit such required information, University reserves the right to cancel this Contract or, if work has been performed, withhold payment until such required submittals have been received.
- 34. EXCLUSIVITY.** University is not bound by exclusivity provisions.
- 35. DUAL PAYMENT.** Contractor will not be compensated by any other party for work under this Contract.
- 36. NO THIRD PARTY BENEFICIARIES.** University and Contractor are the only parties to this Contract and are the only parties entitled to enforce its terms. Nothing in this Contract gives, is intended to give, or will be construed to give any benefit or right, whether directly or indirectly, to third persons unless such persons are individually identified by name and expressly described in this Contract as intended beneficiaries.
- 37. TIME IS OF THE ESSENCE.** Contractor agrees that time is of the essence under this Contract.
- 38. FEDERAL TAX IDENTIFICATION NUMBER.** All Contractors must furnish upon request a federal tax identification number to Southern Oregon University. Failure to provide this information could result in invoice payments being withheld.
- 39. FOREIGN CONTRACTOR.** If Contractor is not domiciled or registered to do business in the State of Oregon, Contractor will provide to the Oregon Department of Revenue and the Secretary of State, Corporation Division, all information required by those agencies relative to this Contract. Contractor will demonstrate its legal capacity to perform these services in the State of Oregon prior to entering into this Contract.

40. FORCE MAJEURE. Neither University nor Contractor will be held responsible for delay or default caused by fire, riot, acts of God, terrorist acts, public emergencies, or other acts of political sabotage, or war where such cause was beyond, respectively, University or Contractor's reasonable control. Contractor will, however, make all reasonable efforts to remove or eliminate such cause of delay or default and will, upon the cessation of the cause, diligently pursue performance of the Contract.

41. WAIVER. The failure of University to enforce any provision of this Contract will not constitute a waiver by University of that or any other provision.

42. ATTACHMENTS. All attachments, addenda, schedules and exhibits which are referred to in this Contract are incorporated in this Contract.

43. MERGER. THIS CONTRACT CONSTITUTES THE ENTIRE AGREEMENT BETWEEN THE PARTIES. THERE ARE NO UNDERSTANDINGS, AGREEMENTS, OR REPRESENTATIONS, ORAL OR WRITTEN, NOT SPECIFIED IN THIS CONTRACT REGARDING THIS CONTRACT. NO AMENDMENT, CONSENT, OR WAIVER OF TERMS OF THIS CONTRACT WILL BIND EITHER PARTY UNLESS IN WRITING AND SIGNED BY ALL PARTIES. ANY SUCH AMENDMENT, CONSENT, OR WAIVER WILL BE EFFECTIVE ONLY IN THE SPECIFIC INSTANCE AND FOR THE SPECIFIC PURPOSE GIVEN. CONTRACTOR, BY THE SIGNATURE TO THIS CONTRACT OF ITS AUTHORIZED REPRESENTATIVE, ACKNOWLEDGES HAVING READ AND UNDERSTOOD THE CONTRACT AND CONTRACTOR AGREES TO BE BOUND BY ITS TERMS AND CONDITIONS.

44. ACCESSIBILITY REQUIREMENTS. Contractor will conform to all applicable Web standards and Web accessibility, specifically WCAG 2.0 (Level A).

45. CONFIDENTIAL INFORMATION. Contractor acknowledges that it and its employees or agents may, in the course of performing their responsibilities under this Contract, be exposed to or acquire information that is confidential to University or the State of Oregon. Any and all information of any form obtained by Contractor or its employees or agents in the performance of this Contract shall be deemed confidential information of University and of State ("Confidential Information"). Contractor agrees to hold Confidential Information in strict confidence, using at least the same degree of care that Contractor uses in maintaining the confidentiality of its own confidential information, and not to copy, reproduce, sell assigned, license, market, transfer or otherwise dispose of, give, or disclose Confidential Information to third parties or use Confidential Information for any purposes whatsoever other than in the performance of the Contract, and to advise each of its employees and agents of their obligations to keep Confidential Information confidential. Contractor agrees that Contractor will not at any time during or after the term of this Contract disclose, directly or indirectly, and Confidential Information to any person, and that upon

termination of this Contract, or at University's request, Contractor will turn over to University all documents, papers and other material in Contractors' possession which contain Confidential Information.

46. FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT. Contractor agrees to protect confidentiality of student information and to comply with the Family Educational Rights and Privacy Act of 1974 (FERPA) and its implementing regulations, specifically 20 U.S.C. 1232g, 34 C.F.R. § 99.1 et seq., UO Policy 571-020, with respect to any redisclosure of personally identifiable information from education records obtained from the University.

47. AMBIGUITIES. Each party has participated fully in the review and revision of this Contract and neither party shall be considered the "drafter" for the purposes of any rule of construction that might cause any provision to be construed against the drafter of the Contract.

48. OREGON PUBLIC RECORDS LAW
Contractor hereby acknowledges that any information it discloses to University, any duty of the University to maintain the confidentiality of such information, or any duty of the University to destroy records upon completion of use, is subject to the provisions of the Oregon Public Records law.

49. EXECUTION AND COUNTERPARTS. This Contract may be executed in counterparts, and via facsimile or electronically transmitted signature (i.e. emailed scanned true and correct copy of the signed Contract), each of which will be considered an original and all of which together will constitute one and the same Contract.

50. ORDER OF PRECEDENCE. These Terms and Conditions are for the provision of goods or services to the University. University Standard Terms and Conditions are referenced in the Purchase Order (PO) or any associated contract incorporating these Terms and Conditions. In the event of a conflict between these Terms and Conditions and such PO or contract, these Terms and Conditions take precedence, unless otherwise required by law or a provision is expressly excluded in the associated PO or contract by precise and specific reference to such provision. Whenever possible all Terms and Conditions are to be integrated. By signing this Contract, the Contractor agrees that, in the event of a conflict, all the terms and conditions of this PSC superseded all preprinted Terms and Conditions on any forms used by the Contractor.

51. TAX COMPLIANCE CERTIFICATION: By signature on the Contract, the authorized representative of the Contractor, as required by ORS 305.385(6), hereby certifies, under penalty of perjury, that the Contractor is not, to the best of the undersigned's knowledge, in violation of any Oregon tax laws. For purposes of this certification, (4) "Tax" means a state tax imposed by ORS 401.792 to 401.816 and 320.005 to 320.150 and ORS chapters 118, 314, 316, 317, 318, 321 and 323 and the elderly rental assistance program under ORS 310.630 to 310.706 and local taxes administered by the Department of Revenue under ORS 305.620. [1987 c.843 §6; 1997 c.99 §35; 1997 c.170 §16; 2005 c.94 §21]

**SOUTHERN OREGON UNIVERSITY (a University with
a Governing Board)**

**GENERAL CONDITIONS
FOR PUBLIC IMPROVEMENT
CONTRACTS**

Feb 9, 2016

INSTRUCTIONS: The attached **Southern Oregon University (SOU) General Conditions for Public Improvement Contracts** ("**SOU Public Improvement General Conditions**") apply to all designated public improvement contracts. Changes to the SOU Public Improvement General Conditions (including any additions, deletions or substitutions) should only be made by attaching Public Improvement Supplemental General Conditions. The text of these SOU Public Improvement General Conditions should not otherwise be altered.

Note: All references to Oregon Administrative Rules ("OARs") previously found in Chapter 580 have been transferred to SOU by operation of law by Senate Bill 270 (2013). They are available at: <http://www.sou.edu/policies/oar-ors.html>

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SOUTHERN OREGON UNIVERSITY (a University with a Governing Board)
GENERAL CONDITIONS FOR PUBLIC IMPROVEMENT CONTRACTS
(“SOU Public Improvement General Conditions”)

SECTION A
GENERAL PROVISIONS

A.1 DEFINITION OF TERMS

In the Contract Documents the following terms shall be as defined below:

APPLICABLE LAWS, means federal, state and local laws, codes, rules, regulations and ordinances applicable to the Work and to the Contract.

ARCHITECT/ENGINEER, means the Person appointed by the Owner to make drawings and specifications and, to provide contract administration of the Work contemplated by the Contract to the extent provided herein or by supplemental instruction of Owner (under which Owner may delegate responsibilities to the Architect/Engineer), in accordance with ORS Chapter 671 (Architects) or ORS Chapter 672 (Engineers) and administrative rules adopted thereunder.

BID, means an offer binding on the Bidder and submitted in response to an Instructions to Bidders or a proposal in connection with a Request for Proposals.

BIDDER, means an Entity that submits a Bid in response to Instructions to Bidders or a proposer in connection with a Request for Proposals.

CHANGE ORDER, means a written order which, when fully executed by the Parties to this Contract, constitutes a change to the Contract Documents. Change Orders shall be issued in accordance with the changes provisions in Section D and, if applicable, establish a Contract Price or Contract Time adjustment. A Change Order shall not be effective until executed as a Change Order.

CLAIM, means a demand by Contractor pursuant to Section D.3 for review of the denial of Contractor's initial request for an adjustment of Contract terms, payment of money, extension of Contract Time or other relief, submitted in accordance with the requirements and within the time limits established for review of Claims in these SOU Public Improvement General Conditions.

CONSTRUCTION CHANGE DIRECTIVE, means a written order by the Owner to the Contractor requiring a change in the Work within the general scope of the Contract Documents, issued under the changes provisions of Section D.

CONTRACT, means the written agreement between the Owner and the Contractor comprised of the Contract Documents which describe the Work to be done and the obligations between the parties.

CONTRACT DOCUMENTS, means the Solicitation Document and addenda thereto, Instructions to Bidders, Supplemental Instructions to Bidders, the SOU Public Improvement Contract, SOU Public Improvement General Conditions, Public Improvement Supplemental General Conditions, if any, the accepted Bid, Plans, Specifications, Change Orders, and Construction Change Directives.

CONTRACT PERIOD, as set forth in the Contract Documents, means the total period of time beginning with the full execution of this Contract and, if applicable, the issuance of a Notice to Proceed and concluding upon Final Completion.

CONTRACT PRICE, means the total of the awarded Bid amount, as increased or decreased by the price of approved alternates, as indicated in the Contract Documents.

CONTRACT TIME, means any incremental period of time allowed

under the Contract to complete any portion of the Work as reflected in the project schedule.

CONTRACTOR, means the Person awarded the Contract for the Work contemplated.

DAYS, are calendar days, including weekdays, weekends and holidays, unless otherwise specified.

DIRECT COSTS, means, unless otherwise provided in the Contract Documents, the cost of materials, including sales tax, cost of delivery; cost of labor, including social security, Medicare and unemployment insurance, and fringe benefits required by agreement or custom; worker's compensation insurance; project specific insurance (including, without limitation, Builder's Risk Insurance and Builder's Risk Installation Floater); bond premiums, rental cost of equipment, and machinery required for execution of the Work; Owner's costs to correct defective Work; and the additional costs of field personnel directly attributable to the Work.

FINAL COMPLETION, means the final completion of all requirements under the Contract, including Contract Closeout as described in Section K but excluding Warranty Work as described in Section I.2, and the final payment and release of all retainage, if any, released.

FORCE MAJEURE, means an act, event or occurrence caused by fire, riot, war, acts of God, nature, sovereign, or public enemy, strikes, freight embargoes or any other act, event or occurrence that is beyond the control of the party to this Contract who is asserting Force Majeure.

MWESB REPORT, means an accurate report by the Contractor to the Owner identifying all Minority, Women and Emerging Small Business (MWESB) enterprises, as those terms are defined in ORS 200.005, receiving contracts throughout the course of the Work. An initial MWESB report is required (see Section E.2.9) and MWESB Reports are required annually (see Section E.2.9) and as a condition of final payment (see Section K.1). The initial report shall be in the form required by SOU and as posted from time to time on the SOU website and shall include the total number of contracts and subcontracts awarded to MWESB enterprises and the dollar value of their respective contracts and subcontracts. The annual reports shall include the total number of contracts and subcontracts awarded to MWESB enterprises, the dollar value of each, and the expenditure toward each contract and subcontract during the previous twelve (12) months. The final report shall include the total number of contracts and subcontracts awarded to MWESB enterprises and the dollar value of their respective contracts and subcontracts including all Change Orders incorporated during the course of the project. The reports shall only include enterprises certified with the State of Oregon as MWESB enterprises and shall include individual identification of each enterprise as a Minority business enterprise, a Women business enterprise, and/or an Emerging Small Business Enterprise, as applicable.

NOTICE TO PROCEED, means the official written notice from the Owner stating that the Contractor is to proceed with the Work defined in the Contract Documents. Notwithstanding the Notice to Proceed, Contractor shall not be authorized to proceed with the Work until all initial Contract requirements, including the Contract, performance bond and payment bond, and certificates of insurance, have been fully executed and submitted to Owner in a suitable form.

OVERHEAD, means those items which may be included in the Contractor's markup (general and administrative expense and profit only) and that shall not be charged as Direct Cost of the Work,

including without limitation such Overhead expenses as wages or salary of personnel above the level of foreman (i.e., superintendents and project managers), expenses of Contractor's offices and supplies at the job site (e.g. job trailer) and at Contractor's principal place of business and including expenses of personnel staffing the job site office and Contractor's principal place of business, and Commercial General Liability Insurance and Automobile Liability Insurance.

OWNER, means Southern Oregon University. Owner may elect, by written notice to Contractor, to delegate certain duties to more than one party, including without limitation, to an Architect/Engineer. However, nothing in these SOU Public Improvement General Conditions is intended to abrogate the separate design professional responsibilities of Architects under ORS Chapter 671 or of Engineers under ORS Chapter 672.

PERSON, means a natural person or entity doing business as a sole proprietorship, a partnership, a joint venture, a corporation, a limited liability company or partnership, or any other entity possessing the legal capacity to contract.

PLANS, means the drawings which show the location, type, dimensions, and details of the Work to be done under the Contract.

PUNCH LIST, means the list of Work yet to be completed or deficiencies which need to be corrected in order to achieve Final Completion of the Contract.

RECORD DOCUMENT, means the as-built Plans, Specifications, testing and inspection records, product data, samples, manufacturer and distributor/supplier warranties evidencing transfer of ownership to Owner, operational and maintenance manuals, shop drawings, Construction Change Directives, MWESB Reports, correspondence, certificate(s) of occupancy, and other documents listed in Subsection B.9.1 of these SOU Public Improvement General Conditions, recording all Services performed.

SOLICITATION DOCUMENT, means Instructions to Bidders or Bidders or a Request for Proposal or a Request for Quotes.

SPECIFICATION, means any description of the physical or functional characteristics of the Work, or of the nature of a supply, service or construction item. Specifications may include a description of any requirement for inspecting, testing or preparing a supply, service or construction item for delivery and the quantities or qualities of materials to be furnished under the Contract. Specifications generally will state the results or products to be obtained and may, on occasion, describe the method and manner of doing the Work to be performed. Specifications may be incorporated by reference and/or may be attached to the Contract.

SUBCONTRACTOR, means a Person having a direct contract with the Contractor, or another Subcontractor, to perform one or more items of the Work.

SUBSTANTIAL COMPLETION, means the date when the Owner accepts in writing the construction, alteration or repair of the improvement to real property constituting the Work or any designated portion thereof as having reached that state of completion when it may be used or occupied for its intended purpose. Substantial Completion of facilities with operating systems occurs only after thirty (30) continuous Days of successful, trouble-free operation of the operating systems as provided in Section K.4.2.

SUBSTITUTIONS, means items that in function, performance, reliability, quality, and general configuration are the same or better than the product(s) specified. Approval of any substitute item shall be solely determined by the Owner. The decision of the Owner is final.

PUBLIC IMPROVEMENT SUPPLEMENTAL GENERAL CONDITIONS, means those conditions that remove from, add to, or modify these SOU Public Improvement General Conditions. Public Improvement Supplemental General Conditions may be included in the Solicitation Document or may be a separate attachment to the Contract.

WORK, means the furnishing of all materials, equipment, labor, transportation, services and incidentals necessary to successfully complete any individual item or the entire Contract and the carrying out of duties and obligations imposed by the Contract Documents.

A.2 SCOPE OF WORK

The Work contemplated under this Contract includes all labor, materials, transportation, equipment and services for, and incidental to, the completion of all construction work in connection with the project described in the Contract Documents. The Contractor shall perform all Work necessary so that the project can be legally occupied and fully used for the intended use as set forth in the Contract Documents.

A.3 INTERPRETATION OF CONTRACT DOCUMENTS

- A.3.1 Unless otherwise specifically defined in the Contract Documents, words which have well-known technical meanings or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings. Contract Documents are intended to be complementary. Whatever is called for in one, is interpreted to be called for in all. However, in the event of conflicts or discrepancies among the Contract Documents, interpretations will be based on the following descending order of precedence:
- (a) Contract Change Orders and Construction Change Directives, with those of later date having precedence over those of an earlier date;
 - (b) The SOU Public Improvement Contract;
 - (c) The SOU Public Improvement General Conditions;
 - (d) Division One (General Requirements) of the Specifications;
 - (e) Detailed Schedules of finishes, equipment and other items included in the Specifications;
 - (f) Plans and Specifications (other than Division One and the Detailed Schedules to the Specifications);
 - (g) Large-scale drawings on Plans;
 - (h) Small-scale drawings on Plans;
 - (i) Dimension numbers written on Plans which shall prevail and take precedence over dimensions scaled from Plans;
 - (j) The Solicitation Document, and any addenda thereto;
 - (k) The accepted Bid.
- A.3.2 In the case of an inconsistency between Plans and Specifications or within either document not clarified by addendum, the better quality or greater quantity of Work shall be provided in accordance with the Owner's interpretation in writing.
- A.3.3 If the Contractor finds discrepancies in, or omissions from the Contract Documents, or if the Contractor is in doubt as to their meaning, the Contractor shall at once notify the Owner. Matters concerning and interpretation of requirements of the Contract Documents will be decided by the Owner, who may delegate that duty in some instances to the Architect/Engineer. Responses to Contractor's requests for interpretation of Contract

Documents will be made in writing by Owner (or the Architect/Engineer) within any time limits agreed upon or otherwise with reasonable promptness. Interpretations and decisions of the Owner (or Architect/Engineer) will be consistent with the intent of and reasonably inferable from the Contract Documents. Contractor shall not proceed without direction in writing from the Owner (or Architect/Engineer).

- A.3.4 References to standard specifications, manuals, codes of any technical society, organization or association, to the laws or regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code, laws or regulations in effect in the jurisdiction where the project is occurring on the first published date of the Solicitation Document, except as may be otherwise specifically stated.

A.4 EXAMINATION OF PLANS, SPECIFICATIONS, AND SITE

- A.4.1 It is understood that the Contractor, before submitting a Bid, has made a careful examination of the Contract Documents; has become fully informed as to the quality and quantity of materials and the character of the Work required; and has made a careful examination of the location and conditions of the Work and the sources of supply for materials. The Owner will in no case be responsible for any loss or for any unanticipated costs that may be suffered by the Contractor as a result of the Contractor's failure to acquire full information in advance in regard to all conditions pertaining to the Work. No oral agreement or conversation with any officer, agent, or personnel of the Owner, or with the Architect/Engineer, either before or after the execution of this Contract, shall affect or modify any of the terms or obligations herein contained.
- A.4.2 Should the Plans or Specifications fail to particularly describe the materials, kind of goods, or details of construction of any aspect of the Work, Contractor shall have the duty to make inquiry of the Owner and Architect/Engineer as to what is required prior to performance of the Work. Absent Specifications to the contrary, the materials or processes that would normally be used to produce first quality finished Work shall be considered a part of the Contract requirements.
- A.4.3 Any design errors or omissions noted by the Contractor shall be reported promptly to the Owner, including without limitation, any nonconformity with Applicable Laws.
- A.4.4 If the Contractor believes that adjustments to cost or Contract Time is involved because of clarifications or instructions issued by the Owner (or Architect/Engineer) in response to the Contractor's notices or requests for information, the Contractor must submit a written request to the Owner, setting forth the nature and specific extent of the request, including all time and cost impacts against the Contract as soon as possible, but no later than thirty (30) Days after receipt by Contractor of the clarifications or instructions issued. If the Owner denies Contractor's request for additional compensation, additional Contract Time, or other relief that Contractor believes results from the clarifications or instructions, the Contractor may proceed to file a Claim under Section D.3, Claims Review Process. If the Contractor fails to perform the obligations of Sections A.4.1 to A.4.3, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations.

A.5 INDEPENDENT CONTRACTOR STATUS

The service or services to be performed under this Contract are those of an independent contractor as defined in ORS 670.600. Contractor represents and warrants that it is not an officer, employee or agent of the Owner as those terms are used in ORS 30.265.

A.6 RETIREMENT SYSTEM STATUS AND TAXES

Contractor represents and warrants that it is not a contributing member of the Public Employees' Retirement System and will be responsible for any federal or state taxes applicable to payment received under this Contract. Contractor will not be eligible for any benefits from these Contract payments of federal Social Security, employment insurance, workers' compensation or the Public Employees' Retirement System, except as a self-employed individual. Unless the Contractor is subject to backup withholding, Owner will not withhold from such payments any amount(s) to cover Contractor's federal or state tax obligations.

A.7 GOVERNMENT EMPLOYMENT STATUS

- A.7.1 If this payment is to be charged against federal funds, Contractor represents and warrants that it is not currently employed by the Federal Government. This does not preclude the Contractor from holding another contract with the Federal Government.
- A.7.2 The Contractor represents and warrants that Contractor is not an employee of the State of Oregon for purposes of performing Work under this Contract.

SECTION B ADMINISTRATION OF THE CONTRACT

B.1 OWNER'S ADMINISTRATION OF THE CONTRACT

- B.1.1 The Owner shall administer the Contract as described in the Contract Documents (1) during construction (2) until final payment is due and (3) during the one-year period for correction of Work. The Owner will act as provided in the Contract Documents, unless modified in writing in accordance with other provisions of the Contract. In performing these tasks, the Owner may rely on the Architect/Engineer or other consultants to perform some or all of these tasks.
- B.1.2 The Owner will visit the site at intervals appropriate to the stage of the Contractor's operations (1) to become generally familiar with and to keep the Owner informed about the progress and quality of the portion of the Work completed, (2) to endeavor to guard the Owner against defects and deficiencies in the Work, and (3) to determine in general if Work is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. The Owner will not make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Owner will neither have control over or charge of, nor be responsible for the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work.
- B.1.3 Except as otherwise provided in the Contract Documents or when direct communications have been specifically authorized, the Owner and Contractor shall communicate with each other about matters arising out of or relating to the Contract. Communications by and with the Architect/Engineer's consultants shall be through the Architect/Engineer. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner.
- B.1.4 Based upon the Architect/Engineer's evaluations of the Contractor's Application for Payment, or unless otherwise stipulated by the Owner, the Architect/Engineer will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

B.2 CONTRACTOR'S MEANS AND METHODS; MITIGATION OF IMPACTS

B.2.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures.

B.2.1 Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures.

B.2.2 The Contractor is responsible to protect and maintain the Work during the course of construction and to mitigate any adverse impacts to the project, including those caused by authorized changes, which may affect cost, schedule, or quality. Should the Contractor request the assistance of Owner in the performance of any Work included in the Contract Documents, and should Owner, at its discretion, agree to provide such assistance, Owner may provide such assistance by using its own forces or by using another contractor. If Owner performs Work using Owner's own forces, Contractor shall pay Owner at the rate of one and one-half (1½) times the standard hourly rate of Owner's forces, plus related overhead and any direct non-salary costs. If Owner performs the Work using another contractor, Contractor shall pay Owner the amount of Owner's direct costs billed by the other contractor for the Work performed, plus the direct salary costs and related overhead and direct non-salary expenses of Owner's forces who are required to monitor that contractor's work. Work performed by Owner using Owner's own forces or those of another contractor shall not affect the Contractor's contractual duties under these provisions, including warranty provisions.

B.2.3 The Contractor is responsible for the actions of all its personnel, laborers, suppliers, and Subcontractors on the project. The Contractor shall enforce strict discipline and good order among Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of persons who are unfit or unskilled for the tasks assigned to them.

B.3 MATERIALS AND WORKMANSHIP

B.3.1 The intent of the Contract Documents is to provide for the construction and completion in every detail of the Work described. All Work shall be performed in a professional manner and unless the means or methods of performing a task are specified elsewhere in the Contract Documents, Contractor shall employ methods that are generally accepted and used by the industry, in accordance with industry standards.

B.3.2 The Contractor is responsible to perform the Work as required by the Contract Documents. Defective Work shall be corrected at the Contractor's expense.

B.3.3 Work done and materials furnished shall be subject to inspection and/or observation and testing by the Owner to determine if they conform to the Contract Documents. Inspection of the Work by the Owner does not relieve the Contractor of responsibility for the Work in accordance with the Contract Documents.

B.3.4 The Contractor shall furnish adequate facilities, as required, for the Owner to have safe access to the Work including, without

limitation, walkways, railings, ladders, tunnels, and platforms. Producers, suppliers, and fabricators shall also provide proper facilities and access to their facilities.

B.3.5 The Contractor shall furnish Samples of materials for testing by the Owner and include the cost of the Samples in the Contract Price.

B.4 PERMITS

Contractor shall obtain and pay for all necessary permits and licenses, except for those specifically excluded in the Supplemental General Conditions, for the construction of the Work, for temporary obstructions, enclosures, opening of streets for pipes, walls, utilities, environmental Work, etc., as required for the project. Owner shall obtain and pay for the general building permit and pay for any specialty permits required for the Work. Contractor shall be responsible for all violations of the law, in connection with the construction or caused by obstructing streets, sidewalks or otherwise. Contractor shall give all requisite notices to public authorities. The Contractor shall pay all royalties and license fees. The Contractor shall defend all suits or claims for infringement of any patent or other proprietary rights and save harmless and blameless from loss, on account thereof, the State of Oregon, Southern Oregon University and its departments, divisions, trustees, members and employees.

B.5 COMPLIANCE WITH GOVERNMENT REGULATIONS

B.5.1 The Contractor shall comply with Applicable Laws pertaining to the Work and the Contract. Failure to comply with such requirements shall constitute a breach of Contract and shall be grounds for Contract termination. Without limiting the generality of the foregoing, Contractor expressly agrees to comply with the following, as applicable:

- (i) Title VI and VII of Civil Rights Act of 1964, as amended;
- (ii) Section 503 and 504 of the Rehabilitation Act of 1973, as amended;
- (iii) the Health Insurance Portability and Accountability Act of 1996;
- (iv) the Americans with Disabilities Act of 1990, as amended;
- (v) ORS Chapter 659A; as amended;
- (vi) all regulations and administrative rules established pursuant to the foregoing laws; and
- (vii) all other applicable requirements of federal and state civil rights and rehabilitation statutes, rules and regulations.

B.5.2 The Contractor shall comply with all applicable requirements of federal and state civil rights and rehabilitation statutes, rules and regulations, and

- (a) Contractor shall not discriminate against Disadvantaged, Minority, Women or Emerging Small Business enterprises, as those terms are defined in ORS 200.005, or a business enterprise that is owned or controlled by or that employs a disabled veteran, as that term is defined in ORS 408.225, in the awarding of subcontracts.

- (b) Contractor shall maintain, in current and valid form, all licenses and certificates required by Applicable Laws or this Contract when performing the Work.

B.5.3 Unless contrary to federal law, Contractor shall certify that it shall not accept a bid from Subcontractors to perform Work as described in ORS 701.005 under this Contract unless such Subcontractors are registered with the Construction Contractors Board in accordance with ORS 701.035 to 701.055 at the time they submit their bids to the Contractor.

B.5.4 Unless contrary to federal law, Contractor shall certify that each landscape contractor, as defined in ORS 671.520(2), performing Work under this Contract holds a valid landscape contractor's license issued pursuant to ORS 671.560.

B.5.5 The following notice is applicable to Contractors who perform excavation Work. "ATTENTION: Oregon law requires you to follow rules adopted by the Oregon Utility

Notification Center. Those rules are set forth in OAR 952-001-0010 through OAR 952-001-0090. You may obtain copies of the rules by calling the center at (503)232-1987.”

- B.5.6 Failure to comply with any or all of the requirements of B.5.1 through B.5.5 shall be a breach of Contract and constitute grounds for Contract termination. Damages or costs resulting from such noncompliance shall be the responsibility of Contractor.

B.6 SUPERINTENDENCE

Contractor shall keep on the site, during the progress of the Work, a competent superintendent and any necessary assistants who shall be satisfactory to the Owner and who shall represent the Contractor on the site. Directions given to the superintendent by the Owner shall be confirmed in writing to the Contractor.

B.7 INSPECTION

- B.7.1 Owner shall have access to the Work at all times.
- B.7.2 Inspection of the Work will be made by the Owner at its discretion. The Owner will have authority to reject Work that does not conform to the Contract Documents. Any Work found to be not in conformance with the Contract Documents, in the discretion of the Owner, shall be removed and replaced at the Contractor's expense.
- B.7.3 The Contractor shall make or obtain at the appropriate time all tests, inspections and approvals of portions of the Work required by the Contract Documents or by Applicable Laws or orders of public authorities having jurisdiction. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work. The Contractor shall give the Owner timely notice of when and where tests and inspections are to be made so that the Owner may be present for such procedures. Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Owner.
- B.7.4 As required by the Contract Documents, Work done or material used without required inspection or testing and/or without providing timely notice to the Owner may be ordered removed at the Contractor's expense.
- B.7.5 If directed to do so any time before the Work is accepted, the Contractor shall uncover portions of the completed Work for inspection. After inspection, the Contractor shall restore such portions of Work to the standard required by the Contract. If the Work uncovered is unacceptable or was done without required testing or inspection or sufficient notice to the Owner, the uncovering and restoration shall be done at the Contractor's expense. If the Work uncovered is acceptable and was done with sufficient notice to the Owner, the uncovering and restoration will be paid for pursuant to a Change Order.
- B.7.6 If any testing or inspection reveals failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Owner's and Architect/Engineer's services and expenses, shall be at the Contractor's expense.
- B.7.7 When the United States government participates in the cost of the Work, or the Owner has an agreement with other public or private organizations, or if any portion of the Work is being performed for a third party or in close proximity to third party facilities, representatives of these organizations shall have the right to inspect the Work affecting their interests or property.

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Their right to inspect shall not make them a party to the Contract and shall not interfere with the rights of the parties of the Contract. Instructions or orders of such parties shall be transmitted to the Contractor, through the Owner.

B.8 SEVERABILITY

If any provision of this Contract is declared by a court to be illegal or in conflict with any law, the validity of the remaining terms and provisions shall not be affected and the rights and obligations of the parties shall be construed and enforced as if the Contract did not contain the particular provision held to be invalid.

B.9 ACCESS TO RECORDS

- B.9.1 The Contractor shall keep, at all times on the Work site, one record copy of the complete Contract Documents, including the Plans, Specifications, Construction Change Directives and addenda, in good order and marked currently to record field changes and selections made during construction, and one record copy of Shop Drawings, Product Data, Samples and similar submittals, and shall at all times give the Owner access thereto.
- B.9.2 The Contractor shall retain and the Owner and its duly authorized representatives shall have access, for a period not less than ten (10) years, to all Record Documents, financial and accounting records, and other books, documents, papers and records of Contractor which are pertinent to the Contract, including records pertaining to Overhead and indirect costs, for the purpose of making audit, examination, excerpts and transcripts. If for any reason, any part of the Work or this Contract shall be subject to litigation, Contractor shall retain all such records until all litigation is resolved and Contractor shall continue to provide Owner and/or its agents with full access to such records until such time as all litigation is complete and all periods for appeal have expired and full and final satisfaction of any judgment, order or decree is recorded and Owner receives a record copy of documentation from Contractor.

B.10 WAIVER

Failure of the Owner to enforce any provision of this Contract shall not constitute a waiver or relinquishment by the Owner of the right to such performance in the future nor of the right to enforce any other provision of this Contract.

B.11 SUBCONTRACTS AND ASSIGNMENT

- B.11.1 The Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound by the terms and conditions of these SOU Public Improvement General Conditions, and to assume toward the Contractor all of the obligations and responsibilities which the Contractor assumes toward the Owner thereunder, unless (1) the same are clearly inapplicable to the subcontract at issue because of legal requirements or industry practices, or (2) specific exceptions are requested by Contractor and approved in writing by Owner. Where appropriate, Contractor shall require each Subcontractor to enter into similar agreements with sub-subcontractors at any level.
- B.11.2 At Owner's request, Contractor shall submit to Owner prior to their execution either Contractor's form of subcontract, or the subcontract to be executed with any particular Subcontractor. If Owner disapproves such form, Contractor shall not execute the form until the matters disapproved are resolved to Owner's satisfaction. Owner's review, comment upon or approval of any such form shall not relieve Contractor of its obligations under this Agreement or be deemed a waiver of such obligations of Contractor.
- B.11.3 The Contractor shall not assign, sell, or transfer its rights, or delegate its responsibilities under this Contract, in whole or

in part, without the prior written approval of the Owner. No such written approval shall relieve Contractor of any obligations of this Contract, and any transferee shall be considered the agent of the Contractor and bound to perform in accordance with the Contract Documents. Contractor shall remain liable as between the original parties to the Contract as if no assignment had occurred.

B.12 SUCCESSORS IN INTEREST

The provisions of this Contract shall be binding upon and shall accrue to the benefit of the parties to the Contract and their respective permitted successors and assigns.

B.13 OWNER'S RIGHT TO DO WORK

Owner reserves the right to perform other or additional work at or near the project site with other forces than those of the Contractor. If such work takes place within or next to the project site, Contractor shall coordinate work with the other contractors or forces, cooperate with all other contractors or forces, carry out the Work in a way that will minimize interference and delay for all forces involved, place and dispose of materials being used so as not to interfere with the operations of another, and join the Work with the work of the others in an acceptable manner and perform it in proper sequence to that of the others. The Owner will resolve any disagreements that may arise between or among Contractor and the other contractors over the method or order of doing all work (including the Work). In case of unavoidable interference, the Owner will establish work priority (including the Work) which generally will be in the sequence that the contracts were awarded.

B.14 OTHER CONTRACTS

In all cases and at any time, the Owner has the right to execute other contracts related to or unrelated to the Work of this Contract. The Contractor of this Contract shall fully cooperate with any and all other contractors without additional cost to the Owner in the manner described in section B.13.

B.15 GOVERNING LAW

This Contract shall be governed by and construed in accordance with the laws of the State of Oregon without regard to principles of conflict of laws.

B.16 LITIGATION

Any Claim between Owner and Contractor that arises from or relates to this Contract and that is not resolved through the Claims Review Process in Section D.3 shall be brought and conducted solely and exclusively within the Circuit Court of Jackson County for the State of Oregon, unless stated otherwise in the Contract Documents, provided, however, if a Claim must be brought in a federal forum, then it shall be brought and conducted solely and exclusively within the United States District Court for the District of Oregon. In no event shall this section be construed as a waiver by the Owner of any form of defense or immunity, whether sovereign immunity, governmental immunity, immunity based on the Eleventh Amendment to the Constitution of the United States or otherwise, from any claim or from the jurisdiction of any court. CONTRACTOR, BY EXECUTION OF THIS CONTRACT, HEREBY CONSENTS TO THE IN PERSONAM JURISDICTION OF THE COURTS REFERENCED IN THIS SECTION B.16.

B.17 ALLOWANCES

B.17.1 The Contractor shall include in the Contract Price all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct.

B.17.2 Unless otherwise provided in the Contract Documents:

- (a) when finally reconciled, allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- (b) Contractor's costs for unloading and handling at the site, labor, installation costs, Overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Price but not in the allowances;
- (c) whenever costs are more than or less than allowances, the Contract Price shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (i) the difference between actual costs and the allowances under Section B.17.2 (a) and (ii) changes in Contractor's costs under Section B.17.2 (b).
- (d) Unless Owner requests otherwise, Contractor shall provide to Owner a proposed fixed price for any allowance work prior to its performance.

B.18 SUBMITTALS, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

B.18.1 The Contractor shall prepare and keep current, for the Architect's/Engineer's approval (or for the approval of Owner if approval authority has not been delegated to the

Architect/Engineer), a schedule and list of submittals which is coordinated with the Contractor's construction schedule and allows the Architect/Engineer reasonable time to review submittals. Owner reserves the right to finally approve the schedule and list of submittals. Submittals include, without limitation, Shop Drawings, Product Data, and Samples which are described below:

- (a) Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor (including any sub-subcontractor), manufacturer, supplier or distributor to illustrate some portion of the Work.
- (b) Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.
- (c) Samples are physical examples which illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

B.18.2 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. The purpose of their submittal is to demonstrate for those portions of the Work for which submittals are required by the Contract Documents the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents. Review of submittals by the Architect/Engineer is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, or for approval of safety precautions or, unless otherwise specifically stated by the Architect/Engineer, of any construction means, methods, techniques, sequences or procedures, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect/Engineer's review of the Contractor's submittals shall not relieve the Contractor of its obligations under the Contract Documents. The Architect/Engineer's approval of a specific item shall not indicate approval of an assembly of which the item is a component. Informational submittals upon which the Architect/Engineer is not expected to take responsive action may be so identified in the Contract Documents. Submittals which are not required by the Contract Documents may be returned by the Architect/Engineer without action.

B.18.3 The Contractor shall review for compliance with the Contract

Documents, approve and submit to the Architect/Engineer Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors. Submittals which are not marked as reviewed for compliance with the Contract Documents and approved by the Contractor may be returned by the Architect/Engineer without action.

- B.18.4 By approving and submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents that the Contractor has determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.
- B.18.5 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Architect/Engineer.
- B.18.6 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect/Engineer's review or approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect/Engineer in writing of such deviation at the time of submittal and (i) the Architect/Engineer has given written approval to the specific deviation as a minor change in the Work, or (ii) a Change Order or Construction Change Directive has been executed by Owner authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect/Engineer's review or approval thereof.
- B.18.7 In the event that Owner elects not to have the obligations and duties described under this Section B.18 performed by the Architect/Engineer, or in the event no Architect/Engineer is employed by Owner on the project, all obligations and duties assigned to the Architect/Engineer hereunder shall be performed by the Owner.

B.19 SUBSTITUTIONS

The Contractor may make Substitutions only with the consent of the Owner, after evaluation by the Owner and only in accordance with a Change Order or Construction Change Directive. Substitutions shall be subject to the requirements of the Bid documents. By making requests for Substitutions, the Contractor: represents that the Contractor has personally investigated the proposed substitute product; represents that the Contractor will provide the same warranty for the Substitution that the Contractor would for the product originally specified unless approved otherwise; certifies that the cost data presented is complete and includes all related costs under this Contract including redesign costs, and waives all claims for additional costs related to the Substitution which subsequently become apparent; and will coordinate the installation of the accepted Substitution, making such changes as may be required for the Work to be completed in all respects.

B.20 USE OF PLANS AND SPECIFICATIONS

Plans, Specifications and related Contract Documents furnished to Contractor by Owner or Owner's Architect/Engineer shall be used solely for the performance of the Work under this Contract. Contractor and its Subcontractors and suppliers are authorized to use and reproduce applicable portions of such documents appropriate to the execution of the Work, but shall not claim any ownership or other interest in them beyond the scope of this Contract, and no such interest shall attach. Unless otherwise indicated, all common law, statutory and other reserved rights, in addition to SOU Public Improvement General Conditions (2/9/2016)

copyrights, are retained by Owner.

B.21 FUNDS AVAILABLE AND AUTHORIZED

Owner reasonably believes at the time of entering into this Contract that sufficient funds are available and authorized for expenditure to finance the cost of this Contract within the Owner's appropriation or limitation. Contractor understands and agrees that, to the extent that sufficient funds are not available and authorized for expenditure to finance the cost of this Contract, Owner's payment of amounts under this Contract attributable to Services performed after the last day of the current biennium is contingent on Owner receiving from the Oregon Legislative Assembly appropriations, limitations or other expenditure authority sufficient to allow Owner, in the exercise of its reasonable administrative discretion, to continue to make payments under this Contract.

B.22 NO THIRD PARTY BENEFICIARIES

Owner and Contractor are the only parties to this Contract and are the only parties entitled to enforce its terms. Nothing in this Contract gives, is intended to give, or shall be construed to give or provide any benefit or right, whether directly, indirectly, or otherwise, to third persons unless such third persons are individually identified by name herein and expressly described as intended beneficiaries of the terms of this Contract.

SECTION C WAGES AND LABOR

C.1 MINIMUM WAGE RATES ON PUBLIC WORKS

Contractor shall comply fully with the provisions of ORS 279C.800 through 279C.870. Documents establishing those conditions, as determined by the Commissioner of the Bureau of Labor and Industries (BOLI), are included as attachments to or are incorporated by reference in the Contract Documents. Pursuant to ORS 279C.830(1)(d), Contractor shall pay workers at not less than the specified minimum hourly rate of wage, and shall include that requirement in all subcontracts. If the Work is subject to both the state prevailing wage rate law and the federal Davis-Bacon Act, Contractor shall pay the higher of the applicable state or federal prevailing rate of wage. Contractor shall provide written notice to all workers of the number of hours per day and days per week such workers may be required to work.

C.2 PAYROLL CERTIFICATION AND FEE REQUIREMENTS

C.2.1 In accordance with ORS 279C.845, the Contractor and every Subcontractor shall submit written certified statements to the Owner, on the form prescribed by the Commissioner of the Bureau of Labor and Industries, certifying the hourly rate of wage paid each worker which the Contractor or the Subcontractor has employed on the project and further certifying that no worker employed on the project has been paid less than the prevailing rate of wage or less than the minimum hourly rate of wage specified in the Contract, which certificate and statement shall be verified by the oath of the Contractor or the Subcontractor that the Contractor or Subcontractor has read the certified statement, that the Contractor or Subcontractor knows the contents of the certified statement, and, that to the Contractor's or Subcontractor's best knowledge and belief, the certified statement is true. The certified statements shall set out accurately and completely the payroll records for the prior week, including the name and address of each worker, the worker's correct classification, rate of pay, daily and weekly number of hours worked, deductions made, and actual wages paid. Certified statements for each week during which the Contractor or Subcontractor has employed a worker on the project shall be submitted once a month, by the fifth business day of the following month. The Contractor and Subcontractors shall preserve the certified statements for a period of ten (10) years from the date of

completion of the Contract.

C.2.2 Pursuant to ORS 279C.845(7), the Owner shall retain 25 percent of any amount earned by the Contractor on this public works project until the Contractor has filed the certified statements required by section C.2.1. The Owner shall pay to the Contractor the amount retained under this subsection within 14 days after the Contractor files the required certified statements, regardless of whether a Subcontractor has failed to file certified statements.

C.2.3 Pursuant to ORS 279C.845(8), the Contractor shall retain 25 percent of any amount earned by a first-tier Subcontractor on this public works project until the first-tier Subcontractor has filed with the Owner the certified statements required by C.2.1. Before paying any amount retained under this subsection, the Contractor shall verify that the first-tier Subcontractor has filed the certified statement. Within 14 days after the first-tier Subcontractor files the required certified statement the Contractor shall pay the first-tier Subcontractor any amount retained under this subsection.

C.2.4 In accordance with statutory requirements and administrative rules promulgated by the Commissioner of the Bureau of Labor and Industries, the fee required by ORS 279C.825(1) will be paid by Owner to the Commissioner.

C.3 PROMPT PAYMENT AND CONTRACT CONDITIONS

C.3.1 As a condition to Owner's performance hereunder, the Contractor shall:

C.3.1.1 Make payment promptly, as due, to all persons supplying to Contractor labor or materials for the prosecution of the Work provided for in this Contract.

C.3.1.2 Pay all contributions or amounts due the State Industrial Accident Fund from such Contractor or Subcontractor incurred in the performance of the Contract.

C.3.1.3 Not permit any lien or claim to be filed or prosecuted against the Owner on account of any labor or material furnished. Contractor will not assign any claims that Contractor has against Owner, or assign any sums due by Owner, to Subcontractors, suppliers, or manufacturers, and will not make any agreement or act in any way to give Subcontractors a claim or standing to make a claim against the Owner.

C.3.1.4 Pay to the Department of Revenue all sums withheld from employees pursuant to ORS 316.167.

C.3.2 As a condition to Owner's performance hereunder, if Contractor fails, neglects or refuses to make prompt payment of any claim for labor or services furnished to the Contractor of a Subcontractor by any person in connection with the project as such claim becomes due, the proper officer(s) representing the Owner may pay the claim and charge the amount of the payment against funds due or to become due Contractor under this Contract. Payment of claims in this manner shall not relieve the Contractor or the Contractor's surety from obligation with respect to any unpaid claims.

C.3.3 The Contractor shall include in each subcontract for property or services entered into by the Contractor and a first-tier subcontractor, including a material supplier, for the purpose of performing a construction contract, a payment clause that obligates the Contractor to pay the first-tier Subcontractor for satisfactory performance under its subcontract within ten (10) Days out of such amounts as are paid to the Contractor by the public contracting agency under such contract.

C.3.4 All employers, including Contractor, that employ subject workers who work under this contract in the State of Oregon shall comply with ORS 656.017 and provide the required Workers' Compensation coverage, unless such employers are exempt under ORS 656.126. Contractor shall ensure that each of its Subcontractors complies with these requirements.

C.4 PAYMENT FOR MEDICAL CARE

As a condition to Owner's performance hereunder, Contractor shall promptly, as due, make payment to any person, partnership, association or corporation furnishing medical, surgical, and hospital care or other needed care and attention, incident to sickness or injury, to the employees of such Contractor, all sums of which the Contractor agrees to pay for such services and all moneys and sums which the Contractor has collected or deducted from the wages of personnel pursuant to any law, contract or agreement for the purpose of providing or paying for such services.

C.5 HOURS OF LABOR

As a condition to Owner's performance hereunder, no person shall be employed to perform Work under this Contract for more than ten (10) hours in any one day or forty (40) hours in any one week, except in cases of necessity, emergency or where public policy absolutely requires it. In such instances, Contractor shall pay the employee at least time and a half pay:

- (a) For all overtime in excess of eight (8) hours a day or forty (40) hours in any one week when the work week is five consecutive Days, Monday through Friday; or
- (b) For all overtime in excess of ten (10) hours a day or forty (40) hours in any one week when the work week is four consecutive Days, Monday through Friday; and
- (c) For all Work performed on Saturday and on any legal holiday specified in ORS 279C.540.

This section C.5 will not apply to Contractor's Work under this Contract to the extent Contractor is currently a party to a collective bargaining agreement with any labor organization.

This Section C.5 shall not excuse Contractor from completion of the Work within the time required under this Contract.

SECTION D CHANGES IN THE WORK

D.1 CHANGES IN WORK

D.1.1 The terms of this Contract shall not be waived, altered, modified, supplemented or amended in any manner whatsoever, without prior written agreement and then only after any necessary approvals have been obtained. A Change Order is required, which shall not be effective until its execution by the parties to this Contract and all approvals required by public contracting laws have been obtained.

D.1.2 It is mutually agreed that changes in Plans, quantities, or details of construction are inherent in the nature of construction and may be necessary or desirable during the course of construction. Within the general scope of this Contract, the Owner may at any time, without notice to the sureties and without impairing the Contract, require changes consistent with this Section D.1. All changes to the Work shall be documented and Change Orders shall be executed under the conditions of the Contract Documents. Such changes may include, but are not limited to:

- (a) Modification of specifications and design.
- (b) Increases or decreases in quantities.
- (c) Increases or decreases to the amount of Work.

- (d) Addition or elimination of any Work item.
- (e) Change in the duration of the project.
- (f) Acceleration or delay in performance of Work.
- (g) Deductive changes.

Deductive changes are those that reduce the scope of the Work, and shall be made by mutual agreement whenever feasible. In cases of suspension or partial termination under Section J, Owner reserves the right to unilaterally impose a deductive change and to self-perform such Work, for which the provisions of B.13 (Owner's Right to Do Work) shall then apply.

Adjustments in compensation shall be made under the provisions of D.1.3, in which costs for deductive changes shall be based upon a Direct Costs adjustment together with the related percentage markup specified for profit, Overhead and other indirect costs, unless otherwise agreed to by Owner.

D.1.3 The Owner and Contractor agree that adjustments to or deletions from the Work shall be administered and compensated according to the following:

- (a) Unit pricing may be utilized at the Owner's option when unit prices or solicitation alternates were provided that established the cost for adjustments to Work, and a binding obligation exists under the Contract on the parties covering the terms and conditions of the adjustment to Work.
- (b) Fixed Fee: If the Owner elects not to utilize unit pricing, or in the event that unit pricing is not available or appropriate, fixed pricing may be used for adjustments to or deletions from the Work. In fixed pricing the basis of payments or total price shall be agreed upon in writing between the parties to the Contract, and shall be established before the Work is done whenever feasible. Notwithstanding the foregoing, the mark-ups set forth in D.1.3(c) shall be utilized in establishing fixed pricing, and such mark-ups shall not be exceeded. Cost and price data relating to adjustments to or deletions from the Work shall be supplied by Contractor to Owner upon request, but Owner shall be under no obligation to make such requests.
- (c) Time and Material: In the event that unit pricing and fixed pricing are not utilized, then adjustments to or deletions from the Work shall be performed on a cost reimbursement basis for Direct Costs. Such Work shall be compensated on the basis of the actual, reasonable and allowable cost of labor, equipment, and material furnished on the Work performed. The Contractor or Subcontractor who performs the Work shall be allowed to add up to ten percent (10%) markup to the Direct Costs as full compensation for profit, Overhead and other indirect costs for Work performed with the Contractor's or Subcontractor's own forces

Each ascending tier Subcontractor or the Contractor that did not perform the Work, will be allowed to add up to five percent (5%) supplemental markup on the Direct Costs of the Work (but not the above allowable markups) covered by a Change Orders. No additional markup shall be permitted for any third tier or greater descending Subcontractor.

Example: \$20,000 of Direct Costs Work performed by a 2nd Tier Subcontractor

	Markup	Allowed Total Fee Plus Markup
General Contractor	5%	\$1,000.00
1 st Tier Sub Contractor	5%	\$1,000.00
2 nd Tier Sub Contractor	10%	\$22,000.00

- (d) Payments made to the Contractor shall be complete compensation for Overhead, profit, and all costs that were incurred by the Contractor or by other forces furnished by the Contractor, including Subcontractors, for adjustments to or deletions from the Work pursuant to a Change Order. Owner may establish a maximum cost for additional Work under this

Section D.1.3, which shall not be exceeded for reimbursement without additional written authorization from Owner in the form of a Change Order. Contractor shall not be required to complete such additional Work without additional authorization.

D.1.4 Any necessary adjustment of Contract Time that may be required as a result of adjustments to or deletions from the Work must be agreed upon by the parties before the start of the revised Work unless Owner authorizes Contractor to start the revised Work before agreement on Contract Time adjustment. Contractor shall submit any request for additional compensation (and additional Contract Time if Contractor was authorized to start Work before an adjustment of Contract Time was approved) as soon as possible but no later than thirty (30) Days after receipt of Owner's request for additional Work. If Contractor's request for additional compensation or adjustment of Contract Time is not made within the thirty (30) Day time limit, Contractor's requests pertaining to that additional Work shall be barred. The thirty (30) Day time limit for making requests shall not be extended for any reason, including without limitation Contractor's claimed inability to determine the amount of additional compensation or adjustment of Contract Time, unless an extension is granted in writing by Owner. If the Owner denies Contractor's request for additional compensation or adjustment of Contract Time, Contractor may proceed to file a Claim under Section D.3, Claims Review Process. No other reimbursement, compensation, or payment will be made, except as provided in Section D.1.5 for impact claims.

D.1.5 If any adjustment to Work under Section D.1.3 causes an increase or decrease in the Contractor's cost of, or the Contract Time required for the performance of any other part of the Work under this Contract, Contractor shall submit a written request to the Owner, setting forth the nature and specific extent of the request, including all time and cost impacts against the Contract as soon as possible, but no later than thirty (30) Days after receipt of Owner's request for adjustments to or deletions from the Work by Contractor.

The thirty (30) Day time limit applies to claims of Subcontractors, suppliers, or manufacturers who may be affected by Owner's request for adjustments to or deletions from the Work and who request additional compensation or an extension of Contract Time to perform; Contractor has responsibility for contacting its Subcontractors, suppliers, or manufacturers within the thirty (30) Day time limit, and including their requests with Contractor's requests. If the request involves Work to be completed by Subcontractors, or materials to be furnished by suppliers or manufacturers, such requests shall be submitted to the Contractor in writing with full analysis and justification for the adjustments to compensation and Contract Time requested. The Contractor shall analyze and evaluate the merits of the requests submitted by Subcontractors, suppliers, and manufacturers to Contractor prior to including those requests and Contractor's analysis and evaluation of those requests with Contractor's requests for adjustments to compensation or Contract Time that Contractor submits to the Owner. Failure of Subcontractors, suppliers, manufacturers or others to submit their requests to Contractor for inclusion with Contractor's requests submitted to Owner within the time period and by the means described in this section shall constitute a waiver of these Subcontractor claims. The Owner will not consider direct requests or claims from Subcontractors, suppliers, manufacturers or others not a party to this Contract. The consideration of such requests and claims under this section does not give any Person not a party to the Contract the right to bring a claim against Owner, whether in this claims process, in litigation, or in any dispute resolution process.

If the Owner denies the Contractor's request for adjustment to compensation or Contract Time, the Contractor may proceed to file a Claim under Section D.3, Claims Review Process.

D.1.6 No request or Claim by the Contractor for additional costs or an adjustment of Contract Time shall be allowed if made after receipt of final payment application under this Contract. Final payment application must be made by Contractor within the time required under Section E.6.4.

D.1.7 It is understood that changes in the Work are inherent in construction of this type. The number of changes, the scope of those changes, and the effect they have on the progress of the original Work cannot be defined at this time. The Contractor is notified that numerous changes may be required and that there will be no compensation made, unless and only to the extent otherwise provided in the Contract Documents, to the Contractor directly related to the number of changes. Each change will be evaluated for extension of Contract Time and increase or decrease in compensation based on its own merit.

D.2.1 DELAYS Delays in construction include “Avoidable Delays”, which are defined in Section D.2.1.1, and “Unavoidable Delays”, which are defined in Section D.2.1.2. The effect of Avoidable Delays is described in Section D.2.2 and the effect of Unavoidable Delays is described in Section D.2.3.

D.2.1.1 Avoidable Delays include any delays other than Unavoidable Delays, and include delays that otherwise would be considered Unavoidable Delays but that:

- (a) Could have been avoided by the exercise of care, prudence, foresight, and diligence on the part of the Contractor or its Subcontractors.
- (b) Affect only a portion of the Work and do not necessarily prevent or delay the prosecution of neither other parts of the Work nor the completion of the whole Work within the Contract Time.
- (c) Do not impact activities on the accepted critical path schedule.
- (d) Are associated with the reasonable interference of other contractors employed by the Owner that do not necessarily prevent the completion of the whole Work within the Contract Time.

D.2.1.2 Unavoidable Delays include delays other than Avoidable Delays that are:

- (a) To the extent caused by any actions of the Owner, or any other employee or agent of the Owner, or by separate contractor employed by the Owner.
- (b) To the extent caused by any site conditions which differ materially from what was represented in the Contract Documents or from conditions that would normally be expected to exist and be inherent to the construction activities defined in the Contract Documents. The Contractor shall notify the Owner immediately of differing site conditions before the area has been disturbed. The Owner will investigate the area and make a determination as to whether or not the conditions differ materially from either the conditions stated in the Contract Documents or those which could reasonably be expected in execution of this particular Contract. If Contractor and the Owner agree that a differing site condition exists, any adjustment to compensation or Contract Time will be determined based on the process set forth in Section D.1.5 for adjustments to or deletions from Work. If the Owner disagrees that a differing site condition exists and denies Contractor’s request for additional compensation or Contract Time, Contractor may proceed to file a Claim under Section D.3, Claims Review Process.
- (c) To the extent caused by Force Majeure acts, events or occurrences that could not have been avoided by the

exercise of care, prudence, foresight, and diligence on the part of the Contractor or its Subcontractors.

(d) To the extent caused by adverse weather conditions. Any adverse weather conditions must be substantiated by documentary evidence that weather conditions were abnormal for the specific time period claimed, could not have been anticipated by the Contractor, and adversely impacted the project in a manner that could not be avoided by rescheduling the Work or by implementing measures to protect against the weather so that the Work could proceed. A rain, windstorm, high water, or other natural phenomenon for the specific locality of the Work, which might reasonably have been anticipated from the previous 10-year historical records of the general locality of the Work, shall not be construed as abnormal. The parties agree that rainfall greater than the following levels cannot be reasonably anticipated:

- (i) Daily rainfall equal to, or greater than, 0.50 inch during a month when the monthly rainfall exceeds the normal monthly average by twenty- five percent (25 %) or more.
- (ii) daily rainfall equal to, or greater than, 0.75 inch at any time.

The Office of the Environmental Data Service of the National Oceanic and Atmospheric Administration of the U.S. Department of Commerce nearest the project site shall be considered the official agency of record for weather information.

D.2.2 The Contractor shall not be entitled to additional compensation or additional Contract Time for Avoidable Delays.

D.2.3 In the event of Unavoidable Delays, based on principles of equitable adjustment, Contractor may be entitled to the following:

- (a) Contractor may be entitled to additional compensation or additional Contract Time, or both, for Unavoidable Delays described in Section D.2.1.2 (a) and (b).
- (b) Contractor may be entitled to additional Contract Time for Unavoidable Delays described in Section D.2.1.2(c) and (d).

In the event of any requests for additional compensation or additional Contract Time, or both, as applicable, arising under this Section D.2.3 for Unavoidable Delays, other than requests for additional compensation or additional Contract Time for differing site conditions for which a review process is established under Section D.2.1.2 (b), Contractor shall submit a written notification of the delay to the Owner within two (2) Days of the occurrence of the cause of the delay. This written notification shall state the cause of the potential delay, the project components impacted by the delay, and the anticipated additional Contract Time extension or the additional compensation, or both, as applicable, resulting from the delay. Within seven (7) Days after the cause of the delay has been mitigated, or in no case more than thirty (30) Days after the initial written notification, the Contractor shall submit to the Owner, a complete and detailed request for additional compensation or additional Contract Time, or both, as applicable, resulting from the delay. If the Owner denies Contractor’s request for additional compensation or adjustment of Contract Time, the Contractor may proceed to file a Claim under Section D.3, Claims Review Process.

If Contractor does not timely submit the notices required under this Section D.2, then unless otherwise prohibited by law, Contractor’s Claim shall be barred.

D.3 CLAIMS REVIEW PROCESS

D.3.1 All Contractor Claims shall be referred to the Owner for review. Contractor's Claims, including Claims for adjustments to compensation or Contract Time, shall be submitted in writing by Contractor to the Owner within five (5) Days after a denial of Contractor's initial request for an adjustment of Contract terms, payment of money, extension of Contract Time or other relief, provided that such initial request has been submitted in accordance with the requirements and within the time limits established in these SOU Public Improvement General Conditions. Within thirty (30) Days after the initial Claim, Contractor shall submit to the Owner a complete and detailed description of the Claim (the "Detailed Notice") that includes all information required by Section D.3.2. Unless the Claim is made in accordance with these time requirements, it shall be waived by Contractor.

D.3.2 The Detailed Notice of the Claim shall be submitted in writing by Contractor and shall include a detailed, factual statement of the basis of the Claim, pertinent dates, Contract provisions which support or allow the Claim, reference to or copies of any documents which support the Claim, the dollar value of the Claim, and the Contract Time adjustment requested for the Claim. If the Claim involves Work to be completed by Subcontractors, the Contractor will analyze and evaluate the merits of the Subcontractor claim prior to forwarding it and that analysis and evaluation to the Owner. The Owner will not consider direct claims from Subcontractors, suppliers, manufacturers, or others not a party to this Contract. Contractor agrees that it will make no agreement, covenant, or assignment, nor will it commit any other act that will permit or assist any Subcontractor, supplier, manufacturer, or other to directly or indirectly make a claim against Owner.

D.3.3 The Owner will review all Claims and take one or more of the following preliminary actions within ten (10) Days of receipt of the Detailed Notice of a Claim: (1) request additional supporting information from the Contractor; (2) inform the Contractor in writing of the time required for adequate review and response; (3) reject the Claim in whole or in part and identify the reasons for rejection; (4) based on principles of equitable adjustment, recommend approval of all or part of the Claim; or (5) propose an alternate resolution.

D.3.4 The Owner's decision shall be final and binding on the Contractor unless appealed by written notice to the Owner within fifteen (15) Days of receipt of the decision. The Contractor must present written documentation supporting the Claim within fifteen (15) Days of the notice of appeal. After receiving the appeal documentation, the Owner shall review the materials and render a decision within thirty (30) Days after receiving the appeal documents.

D.3.5 The decision of the Owner shall be final and binding unless the Contractor delivers to the Owner its request for mediation, which shall be a non-binding process, within fifteen (15) Days of the date of the Owner's decision. The mediation process will be considered to have commenced as of the date the Contractor delivers the request. Both parties acknowledge and agree that participation in mediation is a prerequisite to commencement of litigation of any disputes relating to the Contract. Both parties further agree to exercise their best efforts in good faith to resolve all disputes within sixty (60) Days of the commencement of the mediation through the mediation process set forth herein.

In the event that a lawsuit must be filed within this sixty (60) Day period in order to preserve a cause of action, the parties agree that, notwithstanding the filing, they shall proceed diligently with the mediation to its conclusion prior to actively prosecuting the lawsuit, and shall seek from the Court in which the lawsuit is pending such stays or extensions, including the filing of an answer, as may be necessary to facilitate the mediation process. Further, in the event settlements are reached

on any issues through mediation, the plaintiff shall promptly cause to be entered by the Court a stipulated general judgment of dismissal with prejudice, or other appropriate order limiting the scope of litigation as provided in the settlement.

D.3.6 Should the parties arrive at an impasse regarding any Claims or disputed Claims, it is agreed that the parties shall participate in mediation as specified in Section D.3.5. The mediation process will be considered to have been commenced as of the date one party delivers to the other its request in writing to mediate. The mediator shall be an individual mutually acceptable to both parties, but in the absence of agreement each party shall select a temporary mediator and the temporary mediators shall jointly select the permanent mediator. Each party shall pay its own costs for the time and effort involved in mediation. The cost of the mediator shall be split equally between the two parties. Both parties agree to exercise their best effort in good faith to resolve all disputes in mediation. Participation in mediation is a mandatory requirement of both the Owner and the Contractor. The schedule, time and place for mediation will be mutually acceptable, or, failing mutual agreement, shall be as established by the mediator. The parties agree to comply with Owner's administrative rules governing the confidentiality of mediation, if any, and shall execute all necessary documents to give effect to such confidentiality rules. In any event, the parties shall not subpoena the mediator or otherwise require the mediator to produce records, notes or work product, or to testify in any future proceedings as to information disclosed or representations made in the course of mediation, except to the extent disclosure is required by law.

D.3.7 Unless otherwise directed by Owner, Contractor shall proceed with the Work while any Claim, or mediation or litigation arising from a Claim, is pending. Regardless of the review period or the final decision of the Owner, the Contractor shall continue to diligently pursue the Work as identified in the Contract Documents. In no case is the Contractor justified or allowed to cease or Delay Work, in whole or in part, without a written stop work order from the Owner.

SECTION E PAYMENTS

E.1 SCHEDULE OF VALUES

The Contractor shall submit, at least ten (10) Days prior to submission of its first application for progress payment, a schedule of values ("Schedule of Values") for the contracted Work. This schedule shall provide a breakdown of values for the contracted Work and will be the basis for progress payments. The breakdown shall demonstrate reasonable, identifiable, and measurable components of the Work.

Unless objected to by the Owner, this schedule shall be used as the basis for reviewing Contractor's applications for payment. If objected to by Owner, Contractor shall revise the schedule of values and resubmit the same for approval of Owner.

E.2 APPLICATIONS FOR PAYMENT

E.2.1 Owner shall make progress payments on the Contract monthly as Work progresses, in accordance with the requirements of this Section E.2. Applications for payment shall be based upon estimates of Work completed and the Schedule of Values. As a condition precedent to Owner's obligation to pay, all applications for payment shall be approved by the Owner. A progress payment shall not be considered acceptance or approval of any Work or waiver of any defects therein. Owner shall pay to Contractor interest for overdue invoices at the rate of two-thirds of one percent per month on the progress payment, not including retainage, due the Contractor. Overdue invoices will be those that have not been paid within forty five (45) days from the latest of:

- (a) The date of the receipt of the accurate invoice;
- (b) The date Owner receives the correct application for payment if no invoice is received;
- (c) The date all goods and services have been received; or
- (d) The date a Claim is made certain by agreement of the parties or by operation of law.

Notwithstanding the foregoing, in instances when an application for payment is filled out incorrectly, or when there is any defect or impropriety in any submitted application or when there is a good faith dispute, Owner shall so notify the Contractor within fifteen (15) Days stating the reason or reasons the application for payment is defective or improper or the reasons for the dispute. A defective or improper application for payment, if corrected by the Contractor within seven (7) Days of being notified by the Owner, shall not cause a payment to be made later than specified in this section unless interest is also paid. Payment of interest will be postponed when payment on the principal is delayed because of disagreement between the Owner and the Contractor.

Owner reserves the right, instead of requiring the Contractor to correct or resubmit a defective or improper application for payment, to reject the defective or improper portion of the application for payment and pay the remainder of the application for such amounts which are correct and proper.

Owner, upon written notice to the Contractor, may elect to make payments to the Contractor only by means of Electronic Funds Transfers (EFT) through Automated Clearing House (ACH) payments. If Owner makes this election, the Contractor shall arrange for receipt of the EFT/ACH payments.

E.2.2 Contractor shall submit to the Owner an application for each payment and, if required, receipts or other vouchers showing payments for materials and labor including payments to Subcontractors. Contractor shall include in its application for payment a schedule of the percentages of the various parts of the Work completed, based on the Schedule of Values which shall aggregate to the payment application total, and shall include, on the face of each copy thereof, a certificate in substantially the following form:

"I, the undersigned, hereby certify that the above bill is true and correct, and the payment therefore has not been received.

Signed: _____
 Dated: _____"

E.2.3 Generally, applications for payment will be accepted only for materials that have been installed. Under special conditions, applications for payment for stored materials will be accepted at Owner's sole discretion. Such a payment, if made, will be subject to the following conditions:

- (a) The request for stored material shall be submitted at least thirty (30) Days in advance of the application for payment on which it appears. Applications for payment shall be entertained for major equipment, components or expenditures only.
- (b) The Contractor shall submit applications for payment showing the quantity and cost of the material stored.
- (c) The material shall be stored in a bonded warehouse and Owner shall be granted the right to access the material for the purpose of removal or inspection at any time during the Contract Period.
- (d) The Contractor shall name the Owner as co-insured on the insurance policy covering the full value of the property while in the care and custody of the Contractor until it is installed. A

certificate noting this coverage shall be issued to the Owner.

(e) Payments shall be made for materials and equipment only. The submitted amount in the application for payment shall be reduced by the cost of transportation from the storage site to the project site and for the cost of an inspector to verify delivery and condition of the goods at the storage site. The cost of storage and inspection shall be borne solely by the Contractor.

(f) Within sixty (60) Days of the application for payment, the Contractor shall submit evidence of payment covering the material and/or equipment stored and of payment for the storage site.

(g) Payment for stored materials and/or equipment shall in no way indicate acceptance of the materials and/or equipment or waive any rights under this Contract for the rejection of the Work or materials and/or equipment not in conformance with the Contract Documents.

(h) All required documentation shall be submitted with the respective application for payment.

E.2.4 The Owner reserves the right to withhold all or part of a payment, or may nullify in whole or part any payment previously made, to such extent as may be necessary in the Owner's opinion to protect the Owner from loss because of:

- (a) Work that is defective and not remedied, or that has been demonstrated or identified as failing to conform with Applicable Laws or the Contract Documents;
- (b) third party claims filed or evidence reasonably indicating that such claims will likely be filed unless security acceptable to the Owner is provided by the Contractor;
- (c) failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment (in which case Owner may issue checks made payable jointly to Contractor and such unpaid Persons under this provision, or directly to Subcontractors and suppliers at any level under Section C.3.2.1);
- (d) reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Price;
- (e) damage to the Work, or other damage suffered by the Owner or another contractor;
- (f) reasonable evidence that the Work will not be completed within the Contract Time required by the Contract, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;
- (g) failure to carry out the Work in accordance with the Contract Documents; or
- (h) assessment of liquidated damages, when withholding is made for offset purposes.

E.2.5 Subject to the provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

- (a) Take that portion of the Contract Price properly allocable to completed Work as determined by multiplying the percentage completion of each portion of the Work by the share of the total Contract Price allocated to that portion of the Work in the Schedule of Values, less retainage as provided in Section E.5. Pending final determination of cost to the Owner of changes in the Work, no amounts for changes in the Work can be included in applications for payment until the Contract Price has been adjusted by a

Change Order;

- (b) Add that portion of the Contract Price properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved in advance by the Owner pursuant to Section E.2.3, suitably stored off the site at a location agreed upon in writing), less retainage as provided in Section E.5;
- (c) Subtract the aggregate of previous payments made by the Owner; and
- (d) Subtract any amounts for which the Owner has withheld or nullified payment as provided in the Contract Documents.

E.2.6 Contractor's applications for payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay to a Subcontractor or material supplier.

E.2.7 The Contractor warrants to Owner that title to all Work covered by an application for payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an application for payment all Work for which payments are received from the Owner shall be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided financing, labor, materials and equipment relating to the Work.

E.2.8 If Contractor disputes any determination by Owner with regard to any application for payment, Contractor nevertheless shall continue to expeditiously perform the Work. No payment made hereunder shall be or be construed to be final acceptance or approval of that portion of the Work to which such partial payment relates or shall relieve Contractor of any of its obligations hereunder.

E.2.9 Contractor shall submit its initial MWESB Report within ten (10) Days of Contractor's execution of the Contract. Contractor shall submit annual MWESB Reports on June 30 of each year the Contract is active. Contracts first executed by Contractor within ninety (90) Days before June 30 of the year of execution may at the discretion of Owner be exempt from submitting the annual MWESB Report otherwise due on that June 30. The final MWESB Report shall be filed with the application for final payment. Timely receipt of MWESB Reports by Owner shall be a condition precedent to Owner's obligation to pay any progress payments or final payment otherwise due. Owner shall provide the Contractor with an electronic version of the desired reporting format at the time of execution of the Contract or GMP Amendment for the Contractor's use in submittal of the report, which should be submitted both electronically and in hard copy.

E.3 PAYROLL CERTIFICATION REQUIREMENT

Owner's receipt of payroll certification pursuant to Section C.2 of this Contract shall be a condition precedent to Owner's obligation to pay any progress payments or final payment otherwise due.

E.4 DUAL PAYMENT SOURCES

Contractor shall not be compensated for Work performed under this Contract from any state agency other than the agency that is a party to this Contract.

E.5 RETAINAGE

E.5.1 Retainage shall be withheld and released in accordance with the requirements set forth in former OAR 580-063-0045.

E.5.1.1 Owner may reserve as retainage from any progress payment an amount not to exceed five percent of the payment. As Work
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progresses, Owner may reduce the amount of retainage on or may eliminate retainage on any remaining monthly Contract payments after 50 percent of the Work under the Contract is completed if, in the Owner's discretion, such Work is progressing satisfactorily. Elimination or reduction of retainage shall be allowed only upon written application by the Contractor, which application shall include written approval of Contractor's surety; except that when the Work is 97-1/2 percent completed the Owner may, at its discretion and without application by the Contractor, reduce the retained amount to 100 percent of the value of the Work remaining to be done. Upon receipt of written application by the Contractor, Owner shall respond in writing within a reasonable time.

E.5.1.2 The Contractor may request in writing:

- (a) to be paid amounts which would otherwise have been retained from progress payments where Contractor has deposited acceptable bonds and securities of equal value with Owner or in a custodial account or other mutually-agreed account with an approved bank or trust company to be held in lieu of the cash retainage for the benefit of Owner;
- (b) for construction projects over \$1,000,000, that retainage be deposited in an interest bearing account, established through the State Treasurer for state agencies, in a bank, savings bank, trust company or savings association for the benefit of Owner, with earnings from such account accruing to the Contractor; or
- (c) that the Owner allow Contractor to deposit a surety bond for the benefit of Owner, in a form acceptable to Owner, in lieu of all or a portion of funds retained, or to be retained. Such bond and any proceeds therefrom shall be made subject to all claims in the manner and priority as set forth for retainage.

When the Owner has accepted the Contractor's election of option (a) or (b), Owner may recover from Contractor any additional costs incurred through such election by reducing Contractor's final payment. Where the Owner has agreed to Contractor's request for option (c), Contractor shall accept like bonds from Subcontractors and suppliers on the project from which Contractor has required retainages.

E.5.1.3 The retainage held by Owner shall be included in and paid to the Contractor as part of the final payment of the Contract Price. The Owner shall pay to Contractor interest at the rate of two-thirds of one percent per month on the final payment due Contractor, interest to commence forty five (45) Days after the date which Owner receives Contractor's final approved application for payment and Work under the Contract has been completed and accepted and to run until the date when final payment is tendered to Contractor. The Contractor shall notify Owner in writing when the Contractor considers the Work complete and deliver to Owner its final application for payment and Owner shall, within thirty (30) Days after receiving the written notice and the application for payment, either accept the Work or notify the Contractor of Work yet to be performed on the Contract. If Owner does not within the time allowed notify the Contractor of Work yet to be performed to fulfill contractual obligations, the interest provided by this subsection shall commence to run forty five (45) Days after the end of the 30- Day period.

E.5.1.4 Owner will reduce the amount of the retainage if the Contractor notifies the Owner that the Contractor has deposited in an escrow account with a bank or trust company, in a manner authorized by the Owner, bonds and securities of equal value of a kind approved by the Owner and such bonds and securities have in fact been deposited in accordance with Applicable Laws.

E.5.1.5 The Contractor agrees that if Contractor elects to reserve a retainage from any progress payment due to any Subcontractor

or supplier, such retainage shall not exceed five percent of the payment, and such retainage withheld from Subcontractors and suppliers shall be subject to the same terms and conditions stated in Subsection E.5 as apply to Owner's retainage from any progress payment due to Contractor.

E.6 FINAL PAYMENT

E.6.1 Upon completion of all the Work under this Contract, the Contractor shall notify the Owner, in writing, that Contractor has completed Contractor's obligations under the Contract and shall prepare its application requesting final payment. Upon receipt of such notice and application for payment, the Owner will inspect the Work, and, if acceptable, submit to Contractor a recommendation as to acceptance of the completed Work and the final estimate of the amount due the Contractor. If the Work is not acceptable, Owner will notify Contractor within fifteen (15) Days of Contractor's request for final payment. Upon approval of this final application for payment by the Owner and compliance by the Contractor with provisions in Section K, and Contractor's satisfaction of other provisions of the Contract Documents as may be applicable, the Owner shall pay to the Contractor all monies due under the provisions of these Contract Documents.

E.6.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Owner (1) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least thirty (30) Days' prior written notice has been given to the Owner, (2) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (3) consent of surety, if any, to final payment and (4), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

E.6.3 Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final application for payment.

E.6.4 Contractor agrees to submit its final payment application within ninety (90) Days after Substantial Completion, unless written extension is granted by Owner. Contractor shall not delay final payment application for any reason, including without limitation nonpayment of Subcontractors, suppliers, manufacturers or others not a party to this Contract, or lack of resolution of a dispute with Owner or any other person of matters arising out of or relating to the Contract. If Contractor fails to submit its final payment application within ninety (90) Days after Substantial Completion, and Contractor has not obtained written extension by Owner, all requests or Claims for additional costs or an extension of Contract Time shall be waived.

SECTION F JOB SITE CONDITIONS

F.1 USE OF PREMISES

Contractor shall confine equipment, storage of materials and operation of Work to the limits indicated by Contract Documents, Applicable Laws, permits or directions of the Owner. Contractor shall follow the Owner's instructions regarding use of premises, if any.
SOU Public Improvement General Conditions (2/9/2016)

F.2 PROTECTION OF WORKERS, PROPERTY AND THE PUBLIC

The Contractor shall maintain continuous and adequate protection of all of the Work from damage and shall protect the Owner, workers and property from injury or loss arising in connection with this Contract. Contractor shall remedy acceptably to the Owner any damage, injury, or loss, except such as may be directly due to errors in the Contract Documents or caused by authorized representatives or personnel of the Owner. Contractor shall adequately protect adjacent property as provided by law and the Contract Documents.

F.2.1 The Contractor shall take all necessary precautions for the safety of all personnel on the job site or otherwise engaged in the undertaking of the Work and shall comply with the Contract Documents, best practices and all applicable provisions of federal, state and municipal safety laws and building and fire codes to prevent accidents or injury to persons on, about or adjacent to the premises where the Work is being performed. Contractor shall erect and properly maintain at all times, as required by the conditions and progress of the Work, all necessary safeguards for protection of workers and the public against any hazards created by construction. Contractor shall designate a responsible employee or associate on the Work site, whose duty shall be the prevention of accidents. The name and position of the person designated shall be reported to the Owner. The Owner has no responsibility for Work site safety. Work site safety shall be the responsibility of the Contractor.

F.2.2 The Contractor shall not enter upon private property without first obtaining permission from the property owner or its duly authorized representative. Contractor shall be responsible for the preservation of all public and private property along and adjacent to the Work contemplated under the Contract and shall use every precaution necessary to prevent damage thereto. In the event the Contractor damages any property, the Contractor shall at once notify the property owner and make, or arrange to make, full restitution. Contractor shall, immediately and in writing, report to the Owner all pertinent facts relating to such property damage and the ultimate disposition of the claim for damage.

F.2.3 The Contractor shall be responsible for protection of adjacent work areas including impacts brought about by activities, equipment, labor, utilities, vehicles and materials on the site.

F.2.4 The Contractor shall at all times direct its activities in such a manner as to minimize adverse effects on the environment. Handling of all materials shall be conducted so no release will occur that may pollute or become hazardous. Contractor shall verify that all mechanical or electrical equipment in the construction areas that may be affected by the Work is in working order and shall notify the Owner, in writing, of any equipment not in working order prior to the start of the Work. Start of Work will be considered as acknowledgement that all equipment is in good working order. Contractor shall be required to restore equipment to its original, or better, condition upon completion of the project.

F.2.5 In an emergency affecting the safety of life or limb or of the Work or of adjoining property, the Contractor, without special instruction or authorization from the Owner, shall act reasonably to prevent threatened loss or injury, and shall so act, without appeal, if instructed by the Owner. Any compensation claimed by the Contractor on account of emergency work shall be determined in accordance with section D.

F.3 CUTTING AND PATCHING

F.3.1 The Contractor shall be responsible for coordinating all

cutting, fitting, or patching of the Work to make its several parts come together properly and fit to receive or be received by work of other contractors or Subcontractors shown upon, or reasonably implied by, the Contract Documents.

- F.3.2 The Contractor shall be responsible for restoring all cut, fitted, or patched surfaces to an original condition; provided, however, that if a different condition is specified in the Contract Documents, then Contractor shall be responsible for restoring such surfaces to the condition specified in the Contract Documents.

F.4 CLEANING UP

From time to time as may be prudent or ordered by the Owner and, in any event, immediately after completion of the Work, the Contractor shall, at its own expense, clean up and remove all refuse and unused materials of any kind resulting from the Work. If Contractor fails to do so within twenty-four hours after notification by the Owner the work may be done by others and the cost charged to the Contractor and deducted from payment due the Contractor.

F.5 ENVIRONMENTAL CONTAMINATION

F.5.1. Contractor shall be held responsible for and shall indemnify, defend (with counsel of Owner's choice), and hold harmless Owner from and against any costs, expenses, damages, claims, and causes of action, (including attorney fees), or any of them, resulting from all spills, releases, discharges, leaks and disposal of environmental pollution, including storage, transportation, and handling during the performance of the Work or Contractor's obligations under the Contract which occur as a result of, or are contributed by, the negligence or actions of Contractor or its personnel, agents, or Subcontractors or any failure to perform in accordance with the Contract Documents (except to the extent otherwise void under ORS 30.140). Nothing in this section F.5.1 shall limit Contractor's responsibility for obtaining insurance coverages required under Section G.3 of this Contract, and Contractor shall take no action that would void or impair such coverages.

F.5.1.1 The Contractor agrees to promptly dispose of such spills, releases, discharge or leaks to the satisfaction of Owner and regulatory agencies having jurisdiction in a manner that complies with Applicable Laws. Cleanup shall be at no cost to the Owner and shall be performed by properly qualified and, if applicable, licensed personnel.

F.5.1.2 The Contractor shall obtain the Owner's written consent prior to bringing onto the Work site any (i) environmental pollutants or (ii) hazardous substances or materials, as the same or reasonably similar terms are used in any Applicable Laws. Notwithstanding such written consent from the Owner, the Contractor, at all times, shall:

- (a) properly handle, use and dispose of all environmental pollutants and hazardous substances or materials brought onto the Work site, in accordance with all Applicable Laws;
- (b) be responsible for any and all spills, releases, discharges, or leaks of (or from) environmental pollutants or hazardous substances or materials which Contractor has brought onto the Work site; and
- (c) promptly clean up and remediate, without cost to the Owner, such spills, releases, discharges, or leaks to the Owner's satisfaction and in compliance with all Applicable Laws.

F.5.2 The Contractor shall report all reportable quantity releases, as such releases are defined in Applicable Laws, including but not limited to 40 CFR Part 302, Table 302.4 and in OAR 340-142-0050, to applicable federal, state, and local regulatory and emergency response agencies. Upon discovery, regardless of quantity, Contractor must telephonically report all releases to the

Owner. A written follow-up report shall be submitted to Owner within 48 hours of the telephonic report. Such written report shall contain, as a minimum:

- (a) Description of items released (identity, quantity, manifest numbers, and any and all other documentation required by law.)
- (b) Whether amount of items released is EPA/DEQ reportable, and, if so, when reported.
- (c) Exact time and location of release, including a description of the area involved.
- (d) Containment procedures initiated.
- (e) Summary of communications about the release between Contractor and members of the press or State, local or federal officials other than Owner.
- (f) Description of cleanup procedures employed or to be employed at the site, including disposal location of spill residue.
- (g) Personal injuries, if any, resulting from, or aggravated by, the release.

F.6 ENVIRONMENTAL CLEAN-UP

F.6.1 Unless disposition of environmental pollution is specifically a part of this Contract, or was caused by the Contractor (reference F.5 Environmental Contamination), Contractor shall immediately notify Owner of any hazardous substance(s) which Contractor discovers or encounters during performance of the Work required by this Contract. "Hazardous substance(s)" means any hazardous, toxic and radioactive materials and those substances defined as "hazardous substances," "hazardous materials," "hazardous wastes," "toxic substances," or other similar designations in any federal, state, or local law, regulation, or ordinance, including without limitation asbestos, polychlorinated biphenyl (PCB), or petroleum, and any substances, materials or wastes regulated by 40 CFR, Part 261 and defined as hazardous in 40 CFR S 261.3. In addition to notifying Owner of any hazardous substance(s) discovered or encountered, Contractor shall immediately cease working in any particular area of the project where a hazardous substance(s) has been discovered or encountered if continued work in such area would present a risk or danger to the health or well-being of Contractor's or any Subcontractor's work force, property or the environment.

F.6.2 Upon being notified by Contractor of the presence of hazardous substance(s) on the project site, Owner shall arrange for the proper disposition of such hazardous substance(s).

F.7 FORCE MAJEURE

A party to this Contract shall not be held responsible for delay or default due to Force Majeure acts, events or occurrences unless they could have been avoided by the exercise of reasonable care, prudence, foresight, and diligence by that party. The Owner may terminate this Contract upon written notice after determining that delay or default caused by Force Majeure acts, events or occurrences will reasonably prevent successful performance of the Contract.

SECTION G INDEMNITY, BONDING, AND INSURANCE

G.1 RESPONSIBILITY FOR DAMAGES / INDEMNITY

G.1.1 The Contractor shall be responsible for all damage to property,

injury to persons, and loss, expense, inconvenience, and delay that may be caused by, or result from, the carrying out of the Work to be done under this Contract, or from any act, omission or neglect of the Contractor, its Subcontractors, employees, guests, visitors, invitees and agents.

To the fullest extent permitted by law, Contractor shall indemnify, defend (with counsel approved by Owner) and hold harmless the Owner, Architect/Engineer, Architect/Engineer's consultants, and their respective officers, directors, agents, employees, partners, members, stockholders and affiliated companies (collectively "Indemnitees") from and against all liabilities, damages, losses, claims, expenses (including reasonable attorney fees), demands and actions of any nature whatsoever which arise out of, result from or are related to, (a) any damage, injury, loss, expense, inconvenience or delay described in this Section G.1., (b) any accident or occurrence which happens or is alleged to have happened in or about the project site or any place where the Work is being performed, or in the vicinity of either, at any time prior to the time the Work is fully completed in all respects, (c) any failure of the Contractor to observe or perform any duty or obligation under the Contract Documents which is to be observed or performed by the Contractor, or any breach of any agreement, representation or warranty of the Contractor contained in the Contract Documents or in any subcontract, (d) the negligent acts or omissions of the Contractor, a Subcontractor or anyone directly or indirectly employed by them or any one of them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder (except to the extent otherwise void under ORS 30.140), and (e) any lien filed upon the project or bond claim in connection with the Work. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Section G.1.2.

G.1.2 In claims against any person or entity indemnified under Section G.1.2 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under Section G.1.2 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

G.2 PERFORMANCE AND PAYMENT SECURITY; PUBLIC WORKS BOND

G.2.1 When the Contract Price is \$100,000 or more (or \$50,000 or more in the case of Contracts for highways, bridges and other transportation projects), the Contractor shall furnish and maintain in effect at all times during the Contract Period a performance bond in a sum equal to the Contract Price and a separate payment bond also in a sum equal to the Contract Price. Contractor shall furnish such bonds even if the Contract Price is less than the above thresholds if otherwise required by the Contract Documents.

G.2.2 Bond forms furnished by the Owner and notarized by awarded Contractor's surety company authorized to do business in Oregon are the only acceptable forms of performance and payment security, unless otherwise specified in the Contract Documents.

G.2.3 Before execution of the Contract the Contractor shall file with the Construction Contractors Board, and maintain in full force and effect, the separate public works bond required by Oregon Laws 2005, Chapter 360, and OAR 839-025-0015, unless otherwise exempt under those provisions. The Contractor shall also include in every subcontract a provision requiring the Subcontractor to have a public works bond filed with the Construction Contractors Board before starting Work, unless

otherwise exempt, and shall verify that the Subcontractor has filed a public works bond before permitting any Subcontractor to start Work.

G.3 INSURANCE

G.3.1 Primary Coverage: Insurance carried by Contractor under this Contract shall be the primary coverage. The coverages indicated are minimums unless otherwise specified in the Contract Documents.

G.3.2 Workers' Compensation: All employers, including Contractor, that employ subject workers who work under this Contract in the State of Oregon shall comply with ORS 656.017 and provide the required Workers' Compensation coverage, unless such employers are exempt under ORS 656.126. This shall include Employer's Liability Insurance with coverage limits of not less than the minimum amount required by statute for each accident. Contractors who perform the Work without the assistance or labor of any employee need not obtain such coverage if the Contractor certifies so in writing. Contractor shall ensure that each of its Subcontractors complies with these requirements. The Contractor shall require proof of such Workers' Compensation coverage by receiving and keeping on file a certificate of insurance from each Subcontractor or anyone else directly employed by either the Contractor or its Subcontractors.

G.3.3 Builder's Risk Insurance:

G.3.3.1 Builder's Risk: During the term of this Contract, for new construction the Contractor shall obtain and keep in effect Builder's Risk insurance on an all risk forms, including earthquake and flood, for an amount equal to the full amount of the Contract, plus any changes in values due to modifications, Change Orders and loss of materials added. Such Builder's Risk shall include, in addition to earthquake and flood, theft, vandalism, mischief, collapse, transit, debris removal, and architect's fees "soft costs" associated with delay of project due to insured peril. Any deductible shall not exceed \$50,000 for each loss, except the earthquake and flood deductible which shall not exceed 2 percent of each loss or \$50,000, whichever is greater. The deductible shall be paid by Contractor if Contractor is negligent. The policy will include as loss payees Owner, the Contractor and its Subcontractors as their interests may appear.

G.3.3.2 Builder's Risk Installation Floater: For Work other than new construction, Contractor shall obtain and keep in effect during the term of this Contract, a Builder's Risk Installation Floater for coverage of the Contractor's labor, materials and equipment to be used for completion of the Work performed under this Contract. The minimum amount of coverage to be carried shall be equal to the full amount of the Contract. The policy will include as loss payees Owner, the Contractor and its Subcontractors as their interests may appear. Owner may waive this requirement at its sole and absolute discretion.

G.3.3.3 Such insurance shall be maintained until Owner has occupied the facility.

G.3.3.4 A loss insured under the Builder's Risk insurance shall be adjusted by the Owner and made payable to the Owner as loss payee. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner. The Owner shall have power to adjust and settle a loss with insurers.

G.3.4 General Liability Insurance:

G.3.4.1 Commercial General Liability: Upon execution of a Contract, Contractor shall obtain, and keep in effect at Contractor's expense for the term of the Contract, Commercial General

Liability Insurance ("CGL") covering bodily injury and property damage in the amount of not less than \$1,000,000 per claim and \$2,000,000 per occurrence in a form satisfactory to Owner. This insurance shall include personal injury liability, products and completed operations, and contractual liability coverage for the indemnities provided under this Contract (to the extent contractual liability coverage for the indemnity is available in the marketplace), and shall be issued on an occurrence basis written on ISO Form GC 00 01 (12 04 or later) or an equivalent form approved in advance by Owner. The CGL shall provide separation of insured language.

- G.3.4.2 Automobile Liability: Contractor shall obtain, at Contractor's expense, and keep in effect during the term of this Contract, Automobile Liability Insurance covering owned, and/or hired vehicles, as applicable. The coverage may be written in combination with the Commercial General Liability Insurance. Contractor shall provide proof of insurance of not less than \$1,000,000 per claim and \$2,000,000 per occurrence. Contractor and its Subcontractors shall be responsible for ensuring that all non-owned vehicles maintain adequate Automobile Liability insurance while on site.
- G.3.4.3 Owner may adjust the insurance amounts required in Section G.3.4.1 and G.3.4.2 based upon institution specific risk assessments through the issuance of Supplemental General Conditions and a Contract.
- G.3.4.4 To the extent that the Contract Documents require the Contractor to provide professional design services, design-build, or certifications related to systems, materials, or equipment, the Contractor shall (1) purchase and maintain professional liability/errors-and-omissions insurance with limits of not less than \$1,000,000 for each claim and (2) cause those Subcontractors (of any tier) who are providing professional design services including any design-build services to procure and maintain professional liability/errors-and-omissions insurance with limits of not less than \$1,000,000 for each claim.
- G.3.4.5 "Tail" Coverage: If any of the required liability insurance is arranged on a "claims made" basis, "tail" coverage will be required at the completion of this Contract for a duration of 36 months or the maximum time period available in the marketplace if less than 36 months. Contractor shall furnish certification of "tail" coverage as described or continuous "claims made" liability coverage for 36 months following Final Completion. Continuous "claims made" coverage will be acceptable in lieu of "tail" coverage, provided its retroactive date is on or before the effective date of this Contract. Owner's receipt of the policy endorsement evidencing such coverage shall be a condition precedent to Owner's obligation to make final payment and to Owner's final acceptance of Work or services and related warranty (if any).
- G.3.4.6 Umbrella Liability (if required by Owner through issuance of Supplemental General Conditions): Contractor shall obtain, at Contractor's expense, and keep in effect during the term of the Contract, Umbrella liability Insurance over and above the general liability, automobile liability and workers' compensation coverage if required by Owner in specified limits at time of requirement.
- G.3.4.6 Pollution Liability (if required by Owner through issuance of Supplemental General Conditions): Contractor shall obtain, at Contractor's expense, and keep in effect during the term of the Contract, Pollution liability Insurance in minimum amounts of \$3,000,000 naming Owner as "additional insured," as noted in the "additional insured section below.
- G.3.5 Additional Insured: The general liability insurance coverage, automobile liability, umbrella, and pollution liability if required, shall include the Owner as additional insureds but only with respect to the Contractor's activities to be performed under this

Contract. The additional-insured endorsement for CGL insurance must be written on ISO Form CG 20 10 (10 01) and CG 20 37 (10 01), or their equivalent, but shall not use either of the following forms: CG 20 10 (10 93) or CG 20 10 (03 94).

- G.3.5.1 If Contractor cannot obtain an insurer to name the Owner as additional insureds, Contractor shall obtain at Contractor's expense, and keep in effect during the term of this Contract, Owners and Contractors Protective Liability Insurance, naming the Owner as additional insureds with not less than a \$2,000,000 limit per occurrence. This policy must be kept in effect for 36 months following Final Completion. As evidence of coverage, Contractor shall furnish the actual policy to Owner prior to execution of the Contract.

- G3.6 Notice of Cancellation or Change: If the Contractor receives a non-renewal or cancellation notice from an insurance carrier affording coverage required herein, or receives notice that coverage no longer complies with the insurance requirements herein, Contractor agrees to notify Owner by fax within five (5) business days with a copy of the non-renewal or cancellation notice, or written specifics as to which coverage is no longer in compliance. When notified by Owner, the Contractor agrees to stop Work pursuant to this Contract, unless all required insurance remain in effect. Any failure to comply with the reporting provisions of this insurance, except for the potential exhaustion of aggregate limits, shall not affect the coverages provided to the Owner and its institutions, divisions, officers, and employees.

Owner shall have the right, but not the obligation, of prohibiting Contractor from entering the Work site until a new certificate(s) of insurance is provided to Owner evidencing the replacement coverage. The Contractor agrees that Owner reserves the right to withhold payment to Contractor until evidence of reinstated or replacement coverage is provided to Owner.

- G.3.7 Certificate(s) of Insurance: As evidence of the insurance coverage required by the Contract, the Contractor shall furnish certificate(s) of insurance to the Owner prior to execution of the Contract. The certificate(s) will specify all of the parties who are additional insureds or loss payees for the contract. Insurance coverage required under this Contract shall be obtained from insurance companies or entities acceptable to the Owner and that are eligible to provide such insurance under Oregon law. Eligible insurers include admitted insurers that have been issued a certificate of authority from the Oregon Department of Consumer and Business Services authorizing them to conduct an insurance business and issue policies of insurance in the state of Oregon, and certain non-admitted surplus lines insurers that satisfy the requirements of applicable Oregon law and which are subject to approval by the Owner. The Contractor shall be financially responsible for all deductibles, self-insured retentions and/or self-insurance included hereunder. Any deductible, self-insured retention and/or self-insurance in excess of \$50,000 shall be subject to approval by the Owner in writing and shall be a condition precedent to the effectiveness of any Contract.

SECTION H SCHEDULE OF WORK

H.1 H.1 CONTRACT PERIOD

- H.1.1 Time is of the essence. The Contractor shall at all times carry on the Work diligently, without delay and punctually fulfill all requirements herein. If required by the Contract Documents, Contractor shall commence Work on the site within fifteen (15) Days of Notice to Proceed, unless directed otherwise.
- H.1.2 Unless specifically extended by Change Order, all Work shall be complete by the date contained in the Contract Documents. The Owner shall have the right to accelerate the completion date of the Work, which may require the use of

overtime. Such accelerated Work schedule shall be an acceleration in performance of Work under Section D.1.2 (f) and shall be subject to the provisions of Section D.1.

H.1.3 The Owner shall not waive any rights under the Contract by permitting the Contractor to continue or complete in whole or in part the Work after the date described in Section H.1.2 above.

H.2 SCHEDULE

Contractor shall provide, by or before the pre-construction conference, a detailed project Work schedule for review and acceptance by the Owner. The submitted schedule must illustrate Work by significant project components, significant labor trades, long lead items, broken down by building and/or floor where applicable. Each schedule item shall account for no greater than 5% of the monetary value of the project or 5% of the available time. Schedules with activities of less than one day or valued at less than 1% of the Contract shall be considered too detailed and shall not be accepted. Schedules lacking adequate detail, or unreasonably detailed, shall be rejected. Included within the schedule are the following: Notice to Proceed, Substantial Completion, and Final Completion. Contractor shall provide an updated, full project schedule with each payment request. In addition, twice monthly, the Contractor shall provide an updated three-week forward-looking schedule. Acceptance of the Schedule by the Owner does not constitute agreement by the Owner as to the Contractor's sequencing, means, methods, or durations. Any positive difference between the Contractor's scheduled completion and the contract completion date is float owned by the Owner. Use of the float shall be negotiated. In no case shall the Contractor make a claim for delays if the Work is completed within the Contract Period but after Contractor's scheduled completion.

H.3 PARTIAL OCCUPANCY OR USE

H.3.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage, provided such occupancy or use is consented to by public authorities having jurisdiction over the Work. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have reasonably accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, insurance or self-insurance, maintenance, heat, utilities, and damage to the Work, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents with respect to such portion of the Work. Approval by the Contractor to partial occupancy or use shall not be unreasonably withheld. Immediately prior to such partial occupancy or use, the Owner and Contractor shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work. Partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

SECTION I CORRECTION OF WORK

I.1 CORRECTION OF WORK BEFORE FINAL PAYMENT

The Contractor warrants to the Owner that materials and equipment furnished under the Contract will be of good quality and new unless otherwise required or permitted by the Contract Documents, that the Work will be free from defects, and that the Work will conform to the requirements of the Contract Documents. Work failing to conform to these requirements shall be deemed defective. Contractor shall promptly remove from the premises and replace all defective materials and equipment as determined by the Owner, whether incorporated in the Work or not. Removal and replacement shall be without loss or expense to the Owner, and Contractor shall bear the cost of repairing all Work destroyed or damaged by such removal or replacement. Contractor shall be allowed a period of no longer than thirty (30) Days

after Substantial Completion for completion of defective (Punch List) work. At the end of the thirty-day period, or earlier if requested by the Contractor, Owner shall arrange for inspection of the Work by the Architect/Engineer. Should the work not be complete, and all corrections made, the costs for all subsequent reinspections shall be borne by the Contractor. If Contractor fails to complete the Punch List work within the thirty (30) Day period, Owner may perform such work and Contractor shall reimburse Owner all costs of the same within ten (10) Days after demand without affecting Contractor's obligations.

I.2 WARRANTY WORK

- I.2.1 Neither the final certificate of payment nor any provision of the Contract Documents shall relieve the Contractor from responsibility for defective Work and, unless a longer period is specified, Contractor shall correct all defects that appear in the Work within a period of one year from the date of issuance of the written notice of Substantial Completion by the Owner except for latent defects which will be remedied by the Contractor at any time they become apparent. The Owner shall give Contractor notice of defects with reasonable promptness. Contractor shall perform such warranty work within a reasonable time after Owner's demand. If Contractor fails to complete the warranty work within such period as Owner determines reasonable, or at any time in the event of warranty work consisting of emergency repairs, Owner may perform such work and Contractor shall reimburse Owner all costs of the same within ten (10) Days after demand, without affecting Contractor's obligations. The Contractor shall perform the warranty Work by correcting defects within twenty-four (24) hours of notification by Owner, unless otherwise specified in the Contract Documents. Should the Contractor fail to respond within the specified response time, the Owner may, at its option, complete the necessary repairs using another contractor or its own forces. If Owner completes the repairs using Owner's own forces, Contractor shall pay Owner at the rate of one and one-half (1½) times the standard hourly rate of Owner's forces, plus related overhead and any direct non-salary costs. If Owner completes the repairs using another contractor, Contractor shall pay Owner the amount of Owner's direct costs billed by the other contractor for the work, plus the direct salary costs and related overhead and direct non-salary expenses of Owner's forces who are required to monitor that contractor's work. Work performed by Owner using Owner's own forces or those of another contractor shall not affect the Contractor's contractual duties under these provisions, including warranty provisions.
- I.2.2 Nothing in this Section I.2 shall negate guarantees or warranties for periods longer than one year including, without limitation, such guarantees or warranties required by other sections of the Contract Documents for specific installations, materials, processes, equipment or fixtures.
- I.2.3 In addition to Contractor's warranty, manufacturer's warranties shall pass to the Owner and shall not take effect until such portion of the Work covered by the applicable warranty has been accepted in writing by the Owner.
- I.2.4 The one-year period for correction of Work shall be extended with respect to portions of Work performed after Substantial Completion by the period of time between Substantial Completion and the actual performance of the Work, and shall be extended by corrective Work performed by the Contractor pursuant to this Section, as to the Work corrected. The Contractor shall remove from the site portions of the Work which are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.
- I.2.5 Nothing contained in this Section I.2 shall be construed to establish a period of limitation with respect to other obligations which the Contractor might have under the Contract Documents. Establishment of the period for correction of Work as described in this Section I.2 relates only

to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

- J.1.6 If the Owner prefers to accept Work which is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Price will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

SECTION J

SUSPENSION AND/OR TERMINATION OF THE WORK

J.1 OWNER'S RIGHT TO SUSPEND THE WORK

J.1.1 The Owner has the authority to suspend portions or all of the Work due to the following causes:

- (a) Failure of the Contractor to correct unsafe conditions;
- (b) Failure of the Contractor to carry out any provision of the Contract;
- (c) Failure of the Contractor to carry out orders;
- (d) Conditions, in the opinion of the Owner, which are unsuitable for performing the Work;
- (e) Time required to investigate differing site conditions;
- (f) Any reason considered to be in the public interest.

J.1.2 The Owner shall notify Contractor and the Contractor's Surety in writing of the effective date and time of the suspension, and Owner shall notify Contractor and Contractor's surety in writing to resume Work.

J.2 CONTRACTOR'S RESPONSIBILITIES

J.2.1 During the period of the suspension, Contractor is responsible to continue maintenance at the project just as if the Work were in progress. This includes, but is not limited to, protection of completed Work, maintenance of access, protection of stored materials, temporary facilities, and clean-up.

J.2.2 When the Work is recommenced after the suspension, the Contractor shall replace or renew any Work damaged during the suspension, remove any materials or facilities used as part of temporary maintenance, and complete the Work in every respect as though its prosecution had been continuous and without suspension.

J.3 COMPENSATION FOR SUSPENSION

J.3.1 Depending on the reason for suspension of the Work, the Contractor or the Owner may be due compensation by the other party. If the suspension was required due to acts or omissions of Contractor, the Owner may assess the Contractor actual costs of the suspension in terms of administration, remedial work by the Owner's forces or another contractor to correct the problem associated with the suspension, rent of temporary facilities, and other actual costs related to the suspension. If the suspension was caused by acts or omissions of the Owner, the Contractor may be due compensation which shall be defined using Section D, Changes in Work. If the suspension was required through no fault of the Contractor or the Owner, neither party shall owe the other for the impact.

J.4 OWNER'S RIGHT TO TERMINATE CONTRACT

J.4.1 The Owner may, without prejudice to any other right or remedy, and after giving Contractor seven (7) Days' written notice and an opportunity to cure, terminate the Contract in whole or in part under the following conditions:

- (a) If Contractor should, voluntarily or involuntarily, seek protection under the United States Bankruptcy Code and Contractor as debtor-in-possession or the Trustee for the estate fails to assume the Contract within a reasonable time;
- (b) If Contractor should make a general assignment for the benefit of Contractor's creditors;
- (c) If a receiver should be appointed on account of Contractor's insolvency;
- (d) If Contractor should repeatedly refuse or fail to supply an adequate number of skilled workers or proper materials to carry on the Work as required by the Contract Documents, or otherwise fail to perform the Work in a timely manner;
- (e) If Contractor should repeatedly fail to make prompt payment to Subcontractors or for material or labor, or should disregard laws, ordinances or the instructions of the Owner; or
- (f) If Contractor is otherwise in breach of any part of the Contract.
- (g) If Contractor is in violation of Applicable Laws, either in the conduct of its business or in its performance of the Work.

J.4.2 At any time that any of the above occurs, Owner may exercise all rights and remedies available to Owner at law or in equity, and, in addition, Owner may take possession of the premises and of all materials and appliances and finish the Work by whatever method it may deem expedient. In such case, the Contractor shall not be entitled to receive further payment until the Work is completed. If the Owner's cost of finishing the Work exceeds the unpaid balance of the Contract Price, Contractor shall pay the difference to the Owner.

J.5 TERMINATION FOR CONVENIENCE

J.5.1 Owner may terminate the Contract in whole or in part whenever Owner determines that termination of the Contract is in the best interest of Owner or the public.

J.5.2 The Owner shall provide the Contractor with seven (7) Days prior written notice of a termination for Owner's or for public convenience. After such notice, the Contractor shall provide the Owner with immediate and peaceful possession of the premises and materials located on and off the premises for which the Contractor received progress payment under Section E. Compensation for Work terminated by the Owner under this provision will be according to Section E. In no circumstance shall Contractor be entitled to lost profits for Work not performed due to termination.

J.6 ACTION UPON TERMINATION

J.6.1 Upon receiving a notice of termination, and except as directed otherwise by the Owner, Contractor shall immediately cease placing further subcontracts or orders for materials, services, or facilities. In addition, Contractor shall terminate all subcontracts or orders to the extent they relate to the Work terminated and, with the prior written approval of the Owner, settle all outstanding liabilities and termination settlement proposals arising from the termination of subcontracts and orders.

J.6.2 As directed by the Owner, Contractor shall, upon termination, transfer title and deliver to the Owner all

Record Documents, information, and other property that, if the Contract had been completed, would have been required to be furnished to the Owner.

J.6.3 Upon Owner's notice of termination pursuant to either Section J.4 or J.5, if Owner shall so elect, Contractor shall assign to the Owner such subcontracts and orders as Owner shall specify. In the event Owner elects to take assignment of any such subcontract or order, Contractor shall take such action and shall execute such documents as Owner shall reasonably require for the effectiveness of such assignment and Contractor shall ensure that no contractual arrangement between it and its subcontractors or suppliers of any tier or sub-tier shall prevent such assignment.

SECTION K CONTRACT CLOSEOUT

K.1 RECORD DOCUMENT

As a condition of final payment (and subject to the provisions of section E.6), Contractor shall comply with the following: Contractor shall provide Record Documents for the entire project to Owner. Record Documents shall depict the project as constructed and shall reflect each and every change, modification, and deletion made during the construction. Record Documents are part of the Work and shall be provided prior to the Owner's issuance of final payment. Record Documents include all modifications to the Contract Documents, unless otherwise directed, and accurate MWESB Reports.

K.2 OPERATION AND MAINTENANCE MANUALS

As part of the Work, Contractor shall submit two completed operation and maintenance manuals ("O & M Manuals") for review by the Owner prior to submission of any pay request for more than 75% of the Work. Owner's receipt of the O & M Manuals shall be a condition precedent to any payment thereafter due. The O & M Manuals shall contain a complete set of all submittals, all product data as required by the specifications, training information, telephone list and contact information for all consultants, manufacturers, installer and suppliers, manufacturer's printed data, record and shop drawings, schematic diagrams of systems, appropriate equipment indices, warranties and bonds. The Owner shall review and return one O & M Manual for any modifications or adjustments required. Prior to submission of its final pay request, Contractor shall deliver two complete and approved sets of O & M Manuals in paper form and one complete and approved set in electronic form to the Owner and Owner's receipt of the O & M Manuals shall be a condition precedent to Owner's obligation to make final payment.

K.3 COMPLETION NOTICES

K.3.1 The Contractor shall provide Owner written notice of both Substantial and Final Completion. The certificate of Substantial Completion shall state the date of Substantial Completion, the responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and the time within which the Contractor shall finish all items on the Punch List accompanying the Certificate. Both completion notices must be signed by the Contractor and the Owner to be valid. The Owner shall provide the final signature on the approved notices. The notices shall take effect on the date they are signed by the Owner.

K.3.2 Substantial Completion of a facility with operating systems (e.g., mechanical, electrical, HVAC) shall be that degree of completion that has provided a minimum of thirty (30) continuous Days of successful, trouble-free operation, which period shall begin after all performance and acceptance testing has been successfully demonstrated to the Owner. All equipment contained in the Work, plus all other components necessary to enable the Owner to operate the facility in the manner that was intended, shall be complete on the Substantial Completion date. The Contractor may request that a Punch List be prepared by the Owner with submission of the request for the Substantial

Completion notice.

K.4 TRAINING

As part of the Work, and prior to submission of the final application for payment, the Contractor shall schedule with the Owner training sessions for all equipment and systems as required by the Contract Documents. Contractor shall schedule training sessions at least two weeks in advance of the date of training to allow Owner to provide its personnel with adequate notice. The O & M Manual shall be used as a basis for training. Training shall be a formal session conducted at the Work site, or as required by the Contract Documents, after the equipment and/or system is completely installed and operational in its normal operating environment. One additional "refresher" training at no cost to owner will be required upon owner request for up to 1 year after initial training for equipment or system to be conducted on site. Free web and phone consulting to be provided for one year.

K.5 EXTRA MATERIALS

As part of the Work, Contractor shall provide spare parts, extra maintenance materials, and other materials or products in the quantities specified in the Contract Documents prior to final payment. Delivery point for extra materials shall be designated by the Owner.

K.6 ENVIRONMENTAL CLEAN-UP

As part of the Final Completion notice, or as a separate written notice submitted with or before the notice of Final Completion, the Contractor shall notify the Owner that all environmental and pollution clean-up, remediation and closure have been completed in accordance with all Applicable Laws and pursuant to the authority of all agencies having jurisdiction, and Contractor shall provide Owner with any and all documentation related to the same, including but not limited to directives, orders, letters, certificates and permits related to or arising from such environmental pollution. The notice shall reaffirm the indemnification given under Section F.5.1 above. Contractor's completion of its obligations under this Section K.6 and Owner's receipt of documents evidencing such completion shall be a condition precedent to Owner's obligation to make final payment.

K.7 CERTIFICATE OF OCCUPANCY

Owner's receipt of an unconditioned certificate of occupancy from the appropriate state and/or local building officials shall be a condition precedent to Owner's obligation to make final payment, except to the extent failure to obtain an unconditional certificate of occupancy is due to the fault or neglect of Owner.

K.8 OTHER CONTRACTOR RESPONSIBILITIES

The Contractor shall be responsible for returning to the Owner all property of Owner issued to Contractor during construction such as keys, security passes, site admittance badges, and all other pertinent items. Upon notice from Owner, Contractor shall be responsible for notifying the appropriate utility companies to transfer utility charges from the Contractor to the Owner. The utility transfer date shall not be before Substantial Completion and may not be until Final Completion, if the Owner does not take beneficial use of the facility and the Contractor's forces continue with the Work.

K.9 SURVIVAL

All warranty and indemnification provisions of this Contract, and all of Contractor's other obligations under this Contract that are not fully performed by the time of Final Completion or termination, shall survive Final Completion or any termination of the Contract.

SOUTHERN OREGON UNIVERSITY
STANDARD PUBLIC IMPROVEMENT CONTRACT
PERFORMANCE BOND

Bond No. _____
Solicitation _____
Project Name _____

_____ (Surety #1)	Bond Amount No. 1:	\$ _____
_____ (Surety #2)*	Bond Amount No. 2:*	\$ _____
<i>* If using multiple sureties</i>	Total Penal Sum of Bond:	\$ _____

We, _____ as Principal, and the above identified Surety(ies), authorized to transact surety business in Oregon, as Surety, hereby jointly and severally bind ourselves, our respective heirs, executors, administrators, successors and assigns firmly by these presents to pay unto Southern Oregon University (SOU), the sum of (Total Penal Sum of Bond) _____ (Provided, that we the Sureties bind ourselves in such sum “jointly and severally” as well as “severally” only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety), and

WHEREAS, the Principal has entered into a contract with SOU, the plans, specifications, terms and conditions of which are contained in the above-referenced Solicitation;

WHEREAS, the terms and conditions of the contract, together with applicable plans, standard specifications, special provisions, schedule of performance, and schedule of contract prices, are made a part of this Performance Bond by reference, whether or not attached to the contract (all hereafter called “Contract”); and

WHEREAS, the Principal has agreed to perform the Contract in accordance with the terms, conditions, requirements, plans and specifications, and all authorized modifications of the Contract which increase the amount of the work, the amount of the Contract, or constitute an authorized extension of the time for performance, notice of any such modifications hereby being waived by the Surety:

NOW, THEREFORE, THE CONDITION OF THIS BOND IS SUCH that if the Principal herein shall faithfully and truly observe and comply with the terms, conditions and provisions of the Contract, in all respects, and shall well and truly and fully do and perform all matters and things undertaken by Contractor to be performed under the Contract, upon the terms set forth therein, and within the time prescribed therein, or as extended as provided in the Contract, with or

without notice to the Sureties, and shall indemnify and save harmless SOU, and members thereof, its officers, employees and agents, against any direct or indirect damages or claim of every kind and description that shall be suffered or claimed to be suffered in connection with or arising out of the performance of the Contract by the Principal or its subcontractors, and shall in all respects perform said contract according to law, then this obligation is to be void; otherwise, it shall remain in full force and effect.

Nonpayment of the bond premium will not invalidate this bond, nor shall SOU, be obligated for the payment of any premiums.

This bond is given and received under authority of ORS Chapters 279C and 351, the provisions of which hereby are incorporated into this bond and made a part hereof.

IN WITNESS WHEREOF, WE HAVE CAUSED THIS INSTRUMENT TO BE EXECUTED AND SEALED BY OUR DULY AUTHORIZED LEGAL REPRESENTATIVES.

Dated this _____ day of _____, 20__.

PRINCIPAL: _____

By _____

Signature

Official Capacity

Attest: _____

Corporation Secretary

SURETY: _____

[Add signatures for each surety if using multiple bonds]

BY ATTORNEY-IN-FACT:

[Power-of-Attorney must accompany each surety bond]

Name

Signature

Address

City State Zip

Phone Fax

SOUTHERN OREGON UNIVERSITY

STANDARD PUBLIC IMPROVEMENT CONTRACT

PAYMENT BOND

Bond No. _____
Solicitation _____
Project Name _____

_____ (Surety #1) Bond Amount No. 1: \$ _____
_____ (Surety #2)* Bond Amount No. 2:* \$ _____
** If using multiple sureties* Total Penal Sum of Bond: \$ _____

We, _____, as Principal, and the above identified Surety(ies), authorized to transact surety business in Oregon, as Surety, hereby jointly and severally bind ourselves, our respective heirs, executors, administrators, successors and assigns firmly by these presents to pay unto Southern Oregon University (SOU), the sum of (Total Penal Sum of Bond) _____ (Provided, that we the Sureties bind ourselves in such sum "jointly and severally" as well as "severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety), and

WHEREAS, the Principal has entered into a contract with the SOU, the plans, specifications, terms and conditions of which are contained in above-referenced Solicitation;

WHEREAS, the terms and conditions of the contract, together with applicable plans, standard specifications, special provisions, schedule of performance, and schedule of contract prices, are made a part of this Payment Bond by reference, whether or not attached to the contract (all hereafter called "Contract"); and

WHEREAS, the Principal has agreed to perform the Contract in accordance with the terms, conditions, requirements, plans and specifications, and schedule of contract prices which are set forth in the Contract and any attachments, and all authorized modifications of the Contract which increase the amount of the work, or the cost of the Contract, or constitute authorized extensions of time for performance of the Contract, notice of any such modifications hereby being waived by the Surety:

NOW, THEREFORE, THE CONDITION OF THIS BOND IS SUCH that if the Principal shall faithfully and truly observe and comply with the terms, conditions and provisions of the Contract, in all respects, and shall well and truly and fully do and perform all matters and things by it undertaken to be performed under said Contract and any duly authorized modifications that are made, upon the terms set forth therein, and within the time prescribed therein, or as extended therein as provided in the Contract, with or without notice to the Sureties, and shall indemnify and save harmless SOU and its officers, employees and agents, against any claim for direct or indirect damages of every kind and description that shall be suffered or claimed to be suffered in connection with or arising out of the performance of the Contract by the Contractor or its

subcontractors, and shall promptly pay all persons supplying labor, materials or both to the Principal or its subcontractors for prosecution of the work provided in the Contract; and shall promptly pay all contributions due the State Industrial Accident Fund and the State Unemployment Compensation Fund from the Principal or its subcontractors in connection with the performance of the Contract; and shall pay over to the Oregon Department of Revenue all sums required to be deducted and retained from the wages of employees of the Principal and its subcontractors pursuant to ORS 316.167, and shall permit no lien nor claim to be filed or prosecuted against SOU on account of any labor or materials furnished; and shall do all things required of the Principal by the laws of this State, then this obligation shall be void; otherwise, it shall remain in full force and effect.

Nonpayment of the bond premium will not invalidate this bond, nor shall SOU be obligated for the payment of any premiums.

This bond is given and received under authority of ORS Chapters 279C and 351, the provisions of which hereby are incorporated into this bond and made a part hereof.

IN WITNESS WHEREOF, WE HAVE CAUSED THIS INSTRUMENT TO BE EXECUTED AND SEALED BY OUR DULY AUTHORIZED LEGAL REPRESENTATIVES:

Dated this _____ day of _____, 20__.

PRINCIPAL: _____

By _____
Signature

Official Capacity

Attest: _____
Corporation Secretary

SURETY: _____

[Add signatures for each if using multiple bonds]

BY ATTORNEY-IN-FACT:

[Power-of-Attorney must accompany each bond]

Name

Signature

Address

City State Zip

Phone Fax

PART 1 GENERAL**1.1 REQUIREMENTS INCLUDED**

- A. Contract Description
- B. Conditions of the Contract
- C. Contract Type
- D. Work Sequence
- E. Owner Occupancy
- F. Contractors Use of Premises
- G. Future Work
- H. Specification Conventions

1.2 CONTRACT DESCRIPTION

- A. One contract will be issued for the (3) work scopes briefly described below:
 - 1. **Membrane Roof Replacement** (approx. 9,500 square feet)
 - Remove and recycle the existing membrane roofing
 - Install ¼" densdeck underlayment
 - Install 60 mil mechanically fastened PVC membrane roof (20 year-NDL warranty)
 - Salvage and re-install metal flashings and parapet copings.
 - 2. **Patio Decks Repair & Waterproofing** (approx. 1,600 square feet)
 - Demolish existing topping slabs and hot-mopped waterproofing at (3) patio decks.
 - Install new drain assemblies and overflow drains
 - Pour new sloped topping slabs.
 - Install PUMA deck coating system.
 - Install new standing-seam metal roofing over existing brick
 - Install new sheet metal downspouts
 - 3. **Replace (5) exterior door assemblies**
 - Demolish existing doors, frames & glazing
 - Install new galvanized HM frames, doors, insulated safety glass, and hardware
 - Provide painting, sealants, and re-connection of existing access controls

1.3 CONDITIONS OF THE CONTRACT

- A. The Conditions of the Contract and the General Requirements (Division 1) of these Specifications apply to the work described under each Section hereof. The Contractor shall instruct each subcontractor to incorporate those provisions in their bids.

1.4 CONTRACT TYPE

- A. Construct the Work under a single lump sum contract. A sample contract is included in section B-6 of this project manual.

1.5 WORK SEQUENCE

- A. Sequence and schedule Work to permit Owner's continuous use of the building during construction.
- B. The Contractor shall take all measures necessary to maintain building security and weather protection during the entire project
- C. The Contractor will take all measures necessary to secure the work zone(s) around the building, and to provide safe passage for SOU staff, students and visitors.

1.6 OWNER OCCUPANCY

- A. SOU will occupy the building throughout the entire project.

1.7 CONTRACTOR USE OF PREMISES

- A. Contractor shall limit use of premises to allow:
 - 1. Owner occupancy of adjacent facilities
 - 2. Work by other contractors
 - 3. Work by Owner
- B. Coordinate work on or adjacent to the building with SOU's ongoing operations.
- C. Assume full responsibility for protection and safekeeping of building components and equipment.

1.8 OWNER-FURNISHED PRODUCTS INSTALLED BY OWNER (OFOI)

- A. None

1.9 OWNER-FURNISHED PRODUCTS INSTALLED BY CONTRACTOR (OFCI)

- A. None

END OF SECTION

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Schedule of values.
- B. Applications for payment.
- C. Change procedures.
- D. Defect assessment.

1.2 CASH ALLOWANCES

- A. Not used in this project.

1.3 SCHEDULE OF VALUES

- A. Submit printed schedule on AIA Form G703 - Continuation Sheet for G702. Contractor's standard billing form or electronic media printout will be considered.
- B. Submit Schedule of Values in duplicate within 15 days after date of Owner-Contractor Agreement.
- C. Format: Utilize Table of Contents of this Project Manual. Identify each line item with number and title of major specification Section. Identify site mobilization, bonds and insurance and supervision.
- D. Include separately from within each line item, direct proportional amount of Contractor's overhead and profit.
- E. Revise schedule to list approved Change Orders, with each Application for Payment.

1.4 APPLICATIONS FOR PAYMENT

- A. Submit 1 copy of each application on AIA Form G702 - Application and Certificate for Payment and AIA G703 - Continuation Sheet for G702.
- B. Content and Format: Use Schedule of Values for listing items in Application for Payment.
- C. Submit updated construction schedule with each Application for Payment.
- D. Payment Period: Submit Payment Application each month during construction of the Project. Submit with transmittal letter as specified for Submittals in Section 013300.
- E. Payments: Per SOU General Conditions.
- F. Substantiating Data: With each Payment Application submit:
 - 1. Copies of invoices from each entity performing work or providing materials for the time period.
 - 2. Description of materials stored off-site. Proof of insurance covering one-hundred percent replacement cost of off-site stored materials.
- G. Payment for products stored off the project site: When delay or added cost to Owner can be avoided by storing Products off Site Owner will make payment to Contractor for such Products provided Contractor shall:
 - 1. Locate Storage Facilities within 20 miles of Project Site.
 - 2. Make Storage Facilities available for Owner's observation.
 - 3. Segregate and label Stored Products for specified Project.
 - 4. Assume all risk for loss.
 - 5. Assume responsibility for exceeding Product "shelf life."
 - 6. Protect Stored Products and provide applicable Insurance against their damage, discoloration, and theft, listing the Owner and any Mortgagee as Additional Named Insureds.
 - 7. Submit itemized Inventory and Schedule of Values for Stored Products together with Certificate of Insurance.

1.5 CHANGE PROCEDURES

- A. Submittals: Submit name of individual authorized to receive change documents, and be responsible for informing others in Contractor's employ or Subcontractors of changes to the Work.
- B. The Owner will advise of minor changes in the Work not involving adjustment to Contract Sum/Price or Contract Time by issuing supplemental instructions on AIA Form G710.
- C. Request for Information (RFI): Requests for information, clarifications, interpretations and changes which may or may not change the contract sum shall be made on a form acceptable to the Owner and Contractor.
- D. The Owner may issue an Instruction Bulletin (IB) including a detailed description of proposed change with supplementary or revised drawings and specifications. Within three days the Contractor will prepare and submit a cost estimate a change including any change in Contract Time for executing the change, and the period of time during which the requested price will be considered valid.
- E. Contractor may propose changes by submitting a Request for Information (RFI) to the Owner, describing proposed change and its full effect on the Work. Include a statement describing reason for the change, and effect on Contract Sum/Price and Contract Time with full documentation and a statement describing effect on Work by separate or other Contractors. Document requested substitutions in accordance with Section 016000.
- F. Stipulated Sum/Price Change Order: Based on Proposal Request and Contractor's fixed price quotation or Contractor's request for Change Order as approved by Owner.
- G. Unit Price Change Order: For contract unit prices and quantities, the Change Order will be executed on fixed unit price basis. For unit costs or quantities of units of work which are not pre-determined, execute Work under Construction Change Directive. Changes in Contract Sum/Price or Contract Time will be computed as specified for Change Order.
- H. Construction Change Directive: Owner may issue directive, on AIA Form G713 Construction Change Directive signed by Owner, instructing Contractor to proceed with change in the Work, for subsequent inclusion in a Change Order. Document will describe changes in the Work, and designate method of determining any change in Contract Sum/Price or Contract Time. Promptly execute change.
- I. Change Order Forms: AIA G701 Change Order.
- J. Execution of Change Orders: Owner will issue Change Orders for signatures of parties as provided in Conditions of the Contract.
- K. Correlation of Contractor Submittals:
 - 1. Promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as separate line item and adjust Contract Sum/Price.
 - 2. Promptly revise progress schedules to reflect change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.
 - 3. Promptly enter changes in Project Record Documents.

1.6 DEFECT ASSESSMENT

- A. Replace the Work, or portions of the Work, not conforming to specified requirements.
- B. If, in the opinion of the Owner, it is not practical to remove and replace the Work, the Owner will direct appropriate remedy or adjust payment.
- C. Individual specification sections may modify these options or may identify specific formula or percentage sum/price reduction.
- D. Authority of Owner to assess defects and identify payment adjustments, is final.

- E. Non-Payment for Rejected Products: Payment will not be made for rejected products for any of the following:
 - 1. Products wasted or disposed of in a manner that is not acceptable.
 - 2. Products determined as unacceptable before or after placement.
 - 3. Products not completely unloaded from transporting vehicle.
 - 4. Products placed beyond lines and levels of required Work.
 - 5. Products remaining on hand after completion of the Work.
 - 6. Loading, hauling, and disposing of rejected products.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

NOT USED

END OF SECTION

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Coordination and project conditions.
- B. Preconstruction meeting.
- C. Site mobilization meeting.
- D. Progress meetings.

1.2 COORDINATION AND PROJECT CONDITIONS

- A. Coordinate scheduling, submittals, and Work of various sections of Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- B. Verify utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, operating equipment.
- C. Coordinate space requirements, supports, and installation of mechanical and electrical Work indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- D. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within construction. Coordinate locations of fixtures and outlets with finish elements.
- E. Coordinate completion and cleanup of Work of separate sections in preparation for Substantial Completion and for portions of Work designated for Owner's occupancy.
- F. After Owner occupancy of premises, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

1.3 PRECONSTRUCTION MEETING

- A. Owner will schedule meeting after Notice of Award.
- B. Attendance Required: Owner and Contractor. Subcontractors are encouraged to attend.
- C. Agenda:
 - 1. Execution of Owner-Contractor Agreement.
 - 2. Submission of executed bonds and insurance certificates.
 - 3. Distribution of Contract Documents.
 - 4. Submission of list of Subcontractors, list of products, schedule of values, and progress schedule.
 - 5. Designation of personnel representing parties in Contract.
 - 6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
 - 7. Scheduling and work sequencing.
 - 8. Miscellaneous administrative issues.
- D. Owner will provide a conference report and distribute copies within two days after meeting. Owner and Contractor will copy others as they require.

1.4 PROGRESS MEETINGS

- A. Contractor shall schedule and administer meetings throughout progress of the Work at weekly intervals, dates and location as confirmed by Contractor and Owner.
- B. Attendance Required: Job superintendent, major subcontractors and suppliers when impacted by the current or impending work, Owner and Consulting Engineers as appropriate to agenda topics for each meeting.
- C. General Agenda:
 - 1. Review minutes of previous meetings.
 - 2. Review of past week's work progress.
 - 3. Review construction schedule. Identify items adversely affecting schedule and corrective measures needed to maintain schedule.
 - 4. Review proposed work for week following meeting
 - 5. Review field observations, problems, and decisions.
 - 6. Review of submittals schedule and status of submittals.
 - 7. Review of off-site fabrication and delivery schedules.
 - 8. Changes: change orders, RFI.'s, field directives.
- D. Contractor will provide a conference report and distribute copies within two days after meeting to participants and Owner. Owner will distribute copies to others as they require.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

NOT USED

END OF SECTION

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Submittal procedures.
- B. Proposed products list.
- C. Product data.
- D. Shop drawings.

1.2 SUBMITTAL PROCEDURES

- A. Transmit each submittal with transmittal form. PDF submittals only.
- B. Sequentially number transmittal forms. Mark revised submittals with original number and sequential alphabetic suffix.
- C. On transmittal form Identify Project, Contractor, subcontractor and supplier; pertinent drawing and detail number, and specification section number, appropriate to submittal.
- D. Apply Contractor's stamp, signed or initialed, certifying that review, approval, verification of products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with requirements of the Work and Contract Documents, prior to submission to Owner for approval.
- E. Schedule submittals to expedite Project, and deliver to Owner. Coordinate submission of related items.
- F. For each submittal for review, allow seven days excluding delivery time to and from Contractor.
- G. If deviations from the Contract Documents are shown on the submittal, accompany the submittal with a letter on the Contractor's letterhead identifying the specifics of the deviation(s). Explain why acceptance of the deviations are of benefit to the Owner's interests.
- H. Allow space on submittals for Contractor and Owner review stamps.
- I. When revised for resubmission, identify changes made since previous submission.
- J. Distribute copies of reviewed submittals as appropriate to completion of the Work. Instruct parties to promptly report inability to comply with requirements.
- K. Submittals not requested will not be recognized or processed.

1.3 PROPOSED PRODUCTS LIST

- A. Within 20 days after date of Owner-Contractor Agreement, submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
- B. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

1.4 PRODUCT DATA

- A. Product Data: Submit to Architect for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.
- B. Submit PDF copies.
- C. Identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- D. Indicate product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

- E. After review, produce PDF copies and distribute in accordance with SUBMITTAL PROCEDURES article and for record documents described in Section 017000.

1.5 SHOP DRAWINGS

- A. Shop Drawings: Submit to Architect for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.
- B. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- C. Submit PDF copies.
- D. After review, produce PDF copies and distribute in accordance with SUBMITTAL PROCEDURES article and for record documents described in Section 017000.

1.6 SAMPLES

- A. Samples: Submit for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.
- B. Samples for Selection as Specified in Product Sections:
 - 1. Submit to Owner for aesthetic, color, or finish selection.
 - 2. Submit samples of finishes from full range of manufacturers' standard colors, textures, and patterns for Owner's selection.
- C. Submit samples to illustrate functional and aesthetic characteristics of Products, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
- D. Include identification on each sample, with full Project information.
- E. Submit number of samples specified in individual specification sections; Owner will retain two samples.
- F. After review, produce duplicates and distribute in accordance with SUBMITTAL PROCEDURES article and for record documents purposes described in Section 017000.

1.7 TEST REPORTS

- A. Submit test reports for information for limited purpose of assessing conformance with information given and design concept expressed in Contract Documents.

1.8 CERTIFICATES

- A. When specified in individual specification sections, submit certification by manufacturer, installation/application subcontractor, or Contractor in PDF format specified for Product Data.
- B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- C. Certificates may be recent or previous test results on material or Product but must be acceptable to Owner.

1.9 MANUFACTURER'S INSTRUCTIONS

- A. When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, in PDF format for Product Data.
- B. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

1.10 ERECTION DRAWINGS

A. Not required for this project.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

NOT USED

END OF SECTION

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Temporary Utilities:
 - 1. Temporary electricity.
 - 2. Temporary lighting for construction purposes.
 - 3. Temporary heating.
 - 4. Temporary ventilation.
 - 5. Telephone service.
 - 6. Temporary water service.
 - 7. Temporary sanitary facilities.
- B. Construction Facilities:
 - 1. Field offices and sheds.
 - 2. Vehicular access.
 - 3. Parking.
 - 4. Progress cleaning and waste removal.
- C. Temporary Controls:
 - 1. Barriers.
 - 2. Security.
 - 3. Water control.
 - 4. Dust control.
 - 5. Noise control.
- D. Removal of utilities, facilities, and controls.

1.2 TEMPORARY ELECTRICITY

- A. Contractor will be allowed to use existing on-site power.
- B. Contractor to provide all temporary connections to existing panels and OSHA approved power distribution cords.
- C. Contractor to provide portable generators for additional power

1.3 TEMPORARY LIGHTING FOR CONSTRUCTION PURPOSES

- A. Not required.

1.4 TEMPORARY HEATING

- A. Not required

1.5 TEMPORARY VENTILATION

- A. Provide fans as required to keep fumes out of occupied parts of the building.

1.6 TELEPHONE SERVICE

- A. Provide 24-hour cell phone contact numbers for key personnel.

1.7 TEMPORARY WATER SERVICE

- A. Contractor may use existing on-site water service and shall take measures to conserve use.
- A. Contractor to provide all temporary connections and hoses.

1.8 TEMPORARY SANITARY FACILITIES

- A. Provide at the time of mobilization and maintain sanitary facilities and privacy enclosures until the date of Substantial Completion. Provide facilities approved for use at construction sites by OR-OSHA and the Jackson County Health Department.

1.9 FIELD OFFICES AND SHEDS

- A. Not Required.

1.10 VEHICULAR ACCESS

- A. Confine vehicular traffic to existed pavements. Restore surfaces to pre-construction condition upon completion of project.
- B. Provide unimpeded access for emergency vehicles.
- C. Provide and maintain access to fire hydrants and control valves free of obstructions.
- D. Provide means of removing mud from vehicle wheels before entering streets.
- E. Use designated existing roads for construction traffic.
- F. Clean daily paved surfaces of Public Rights-of-way soiled by operations of the Work.

1.11 PARKING

- A. Limited parking is available for the contractor on the site.
- B. Additional spaces may be purchased on line from SOU parking.
- C. Parking on adjacent public streets is available first come, first served.
- D. Maintenance:
 - 1. Maintain traffic and parking areas in sound condition free of demolition materials.
 - 2. Maintain existing and permanent paved areas used for construction; promptly repair breaks, potholes, standing water, and other deficiencies, to maintain paving and drainage in original condition.
- E. Removal, Repair:
 - 1. Remove all materials, equipment and debris before Substantial Completion.
 - 2. Repair permanent facilities damaged by use, to pre-existing condition.

1.12 PROGRESS CLEANING AND WASTE REMOVAL

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in clean and orderly condition.
- B. Collect and remove waste materials, debris, and rubbish from site weekly (at a minimum) and dispose off-site.

1.13 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas and adjacent properties. Provide pedestrian safety barriers adjacent to all overhead work areas.
- B. Obtain SOU approval for location of drop boxes, materials staging areas, etc.
- C. Provide barricades required by authorities having jurisdiction for public rights-of-way.
- D. Provide protection for plants designated to remain. Replace damaged plants.
- E. Protect non-owned vehicles, stored materials, site, and structures from damage.

1.14 SECURITY

- A. Security Program: Protect Work and Owner's operations from theft, vandalism, and unauthorized entry. Maintain program throughout construction period until Owner occupancy.

1.15 DUST CONTROL

- A. Execute Work by methods to minimize raising dust from construction operations.
- B. Provide positive means to prevent air-borne dust from dispersing into atmosphere.
- C. Comply with City of Ashland ordinances.

1.16 NOISE CONTROL

- A. Provide methods, means, and facilities to minimize noise produced by construction operations.
- B. Comply with City of Ashland noise ordinance.

1.17 SMOKING AREA

- A. Smoking is not permitted on the SOU campus.

1.18 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities, materials, prior to Substantial Completion inspection.
- B. Clean and repair damage caused by installation or use of temporary work.
- C. Restore existing and permanent facilities used during construction to original condition.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

NOT USED

END OF SECTION

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Products.
- B. Product delivery requirements.
- C. Product storage and handling requirements.
- D. Product options.
- E. Product substitution procedures.

1.2 PRODUCTS

- A. Furnish products of qualified manufacturers suitable for intended use. Furnish products of each type by single manufacturer unless specified otherwise.
- B. Do not use materials and equipment removed from existing premises, except as specifically permitted by Contract Documents.
- C. Furnish interchangeable components from same manufacturer for components being replaced.

1.3 PRODUCT DELIVERY REQUIREMENTS

- A. Transport and handle products in accordance with manufacturer's instructions.
- B. Promptly inspect shipments to ensure products comply with requirements, quantities are correct, and products are undamaged.
- C. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.

1.4 PRODUCT STORAGE AND HANDLING REQUIREMENTS

- A. Store and protect products in accordance with manufacturers' instructions.
- B. Store with seals and labels intact and legible.
- C. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.
- D. For exterior storage of fabricated products, place on sloped supports above ground.
- E. Provide bonded off-site storage and protection when site does not permit on-site storage or protection.
- F. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- G. Store loose granular materials on solid flat surfaces in well-drained area. Prevent mixing with foreign matter.
- H. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- I. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

1.5 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Products of one of manufacturers named and meeting specifications.

1.6 PRODUCT SUBSTITUTION PROCEDURES

- A. Only products by manufacturers listed in the specifications are approved for this project.

SECTION 016000
PRODUCT REQUIREMENTS
PAGE 2

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

NOT USED

END OF SECTION

SUBSTITUTION REQUEST FORM

TO: SOU Facilities
351 Walker Avenue
Ashland, OR 97520

PROJECT: **SOUTHERN OREGON UNIVERSITY – Education-Psychology Building Envelope Repairs**

We hereby submit for your consideration the following product instead of the specified item for the above project:

<u>Section</u>	<u>Paragraph</u>	<u>Specified Item</u>
_____	_____	_____

Proposed Substitution: _____

Attach complete technical data, including laboratory tests, if applicable.
Include complete information on changes to Drawings and/or Specifications which proposed substitution would require for its proper installation.

Fill in blanks below:

- A. Does the substitution affect dimensions shown on Drawings?
 - B. The Undersigned agrees to pay for changes to the building design, including engineering and detailing costs caused by the requested substitution.
 - C. What affect does substitution have on other trades?
 - D. Differences between proposed substitution and specified item?
- _____
- E. Manufacturer's guarantees of the proposed and specified items are:
 Same Different (explain on attachment)

The Undersigned states that the function, appearance, quality and building codes compliance are equivalent or superior to the specified item.

Submitted by: _____
Signature _____
Firm _____
Date _____
Telephone (____) _____
Email _____

For Use by Design Consultant:
 Accepted Accepted as Noted
 Not Accepted Received too Late
By _____
Remarks _____

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Closeout procedures.
- B. Final cleaning.
- C. Starting of systems.
- D. Demonstration and instructions.
- E. Protecting installed construction.
- F. Project record documents.
- G. Operation and maintenance data.
- H. Spare parts and maintenance products.
- I. Product warranties and product bonds.

1.2 CLOSEOUT PROCEDURES

- A. When the Work is complete submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Architect review.
- B. Provide to Architect submittals required by the Project Manual and by authorities having jurisdiction of the Work.
- C. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.
- D. Owner will occupy portions of building as specified in Section 011100.
- E. Completion of all requirements of this Section is a prerequisite to the Owner's issuing final payment.

1.3 FINAL CLEANING

- A. Execute final cleaning prior to final project assessment.
- B. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
- C. Clean equipment and fixtures to sanitary condition with cleaning materials appropriate to surface and material being cleaned.
- D. Replace filters of equipment operated during construction.
- E. Clean debris from roofs, gutters, downspouts, and drainage systems.
- F. Clean site; sweep paved areas, rake clean landscaped surfaces.
- G. Remove waste and surplus materials, rubbish, and construction facilities from site.

1.4 STARTING OF SYSTEMS

- A. Two weeks prior to start-up of any mechanical equipment and systems, create a list of all such items scheduled for start-up and present to Owner and Architect. Show anticipated date of start-up for each item.
- B. Notify Architect and Owner seven days prior to start-up of each item of equipment and system.
- C. Verify that each piece of equipment or system has been inspected for proper lubrication, drive rotation, belt tension, control sequence, and for conditions which may cause damage.

- D. Verify tests, meter readings, and specified electrical characteristics agree with those required by equipment or system manufacturer.
- E. Verify that wiring and support components for equipment are complete and tested.
- F. Execute start-up under supervision of applicable manufacturer's representative and Contractors' personnel in accordance with manufacturers' instructions.
- G. When specified in individual specification Sections, require manufacturer to provide authorized representative to be present at site to inspect, check, and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.
- H. Submit a written report in accordance with Section 01330 that equipment or system has been properly installed and is functioning correctly.

1.5 DEMONSTRATION AND INSTRUCTIONS

- A. Schedule with the Owner periods of demonstration and instruction convenient to Owner's staff and Contractor and subcontractors. At each period of instruction and demonstration obtain names, titles and signatures of attendees.
- B. Demonstrate operation of equipment and controls and maintenance of products to Owner's personnel two weeks prior to date of Substantial Completion.
- C. Use operation and maintenance manuals as basis for instruction. Review contents of manual with Owner's personnel in detail to explain all aspects of operation and maintenance, and seasonal adjustments required.
- D. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at agreed time, at equipment location.
- E. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.

1.6 PROTECTING INSTALLED CONSTRUCTION

- A. Protect installed Work and provide special protection where specified in individual specification sections.
- B. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- C. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- D. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- E. Prohibit traffic or storage upon waterproofed or roofed surfaces. When traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- F. Prohibit traffic from landscaped areas.

1.7 PROJECT RECORD DOCUMENTS

- A. Maintain on site one set of the following record documents; record actual revisions to the Work:
 - 1. Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other modifications to the Contract.
 - 5. Reviewed Shop Drawings, Product Data, and Samples.
 - 6. Manufacturer's instruction for assembly, installation, and adjusting.
- B. Ensure that entries showing revisions to the original Documents are complete and

- accurate, enabling future reference by Owner.
- C. Store record documents separate from documents used for construction.
 - D. Record information concurrent with construction progress, not less than weekly.
 - E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
 - 1. Manufacturer's name and product model and number.
 - 2. Product substitutions or alternates utilized.
 - 3. Changes made by Addenda and modifications.
 - F. Record Drawings: Legibly mark each item to record actual construction including:
 - 1. Measured depths of foundations in relation to finish main floor datum.
 - 2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - 3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 - 4. Field changes of dimension and detail.
 - 5. Details not on original Contract drawings.
 - G. Submit documents (one full sized set of printed as-built drawings plus PDF files on jump drive) to Architect with claim for final Application for Payment.

1.8 OPERATION AND MAINTENANCE DATA

- A. Submit O&M data in pdf format.
- B. Contents: Prepare Table of Contents for each section, with each product or system description identified:
 - 1. Part 1: Directory, listing names, addresses, and telephone numbers of Architect, Contractor, Subcontractors, and major equipment suppliers.
 - 2. Part 2: Operation and maintenance instructions, arranged by system and subdivided by specification section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:
 - a. Significant design criteria.
 - b. List of equipment.
 - c. Parts list for each component.
 - d. Operating instructions.
 - e. Maintenance instructions for equipment and systems.
 - f. Maintenance instructions for special finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.
 - 3. Part 3: Project documents and certificates, including the following:
 - a. Copy of the final, approved submittals.
 - b. Shop drawings and product data.
 - c. Air and water balance reports.
 - d. Test reports. Manufacturer's equipment start-up reports.
 - e. Certificates.
 - f. Photocopies of warranties and bonds.

1.9 SPARE PARTS AND MAINTENANCE PRODUCTS

- A. Furnish spare parts, maintenance, and extra products in quantities specified in individual specification sections.
- B. Deliver to and place in location as directed by Owner; obtain receipt of materials by Owner prior to final payment.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

NOT USED
END OF SECTION

PART 1 - GENERAL

1.1 SCOPE OF WORK

- A. Perform selective demolition as required for installation of new roofing, door replacements and deck renovations.
- B. Related Sections:
 - 1. Division 01: Administrative, procedural, and temporary work requirements.

1.2 PRE-DEMOLITION CONFERENCE

- A. Refer to Section 01 31 00 Administrative Requiriements.
- B. Review procedures and coordination required with related Work.

1.3 ENVIRONMENTAL REQUIREMENTS

- A. Maintain continuous weather protection of the building during demolition and re-roofing.
- B. Maintain building security during the entire construction process.
- C. Comply with all DEQ and OR-OSHA regulations.

1.4 SCHEDULING

- A. Schedule all utility interruptions a minimum 48 hours in advance with SOU.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Contractor is required to verify existing conditions prior to submitting a bid for this project.

3.2 GENERAL PROCEDURES AND PROJECT CONDITIONS

- A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
 - 1 Perform Work in accordance with the City of Ashland Ordinances.
 - 2 Comply with the requirements of the insurance carriers providing coverage for this Work.
 - 3 Comply with applicable requirements of NFPA 241.
 - 4 Provide, erect, and maintain temporary barriers and security devices.
 - 5 Use physical barriers to prevent access to areas that could be hazardous to workers or the public.

- 6 Conduct operations to minimize effects on and interference with adjacent structures and building occupants.
 - 7 Do not close or obstruct roadways or sidewalks without prior approval from SOU.
 - 8 Conduct operations to minimize obstruction of public and private entrances and exits. Do not obstruct Code required building exits.
- B. Do not begin operations until receipt of notification to proceed from SOU.
 - C. Protect existing structures and other elements that are not to be removed.
 - 1. Provide bracing and shoring where necessary.
 - D. If suspected hazardous materials are discovered during removal operations that are not noted in the contract documents, stop Work and notify SOU. Hazardous materials include regulated asbestos containing materials, lead, PCB's, and mercury.

3.3 EXISTING UTILITIES

- A. All building utilities will remain in service throughout the project.
- B. Protect from damage existing utilities scheduled to remain.
- C. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 2 (two) days prior written notification to Owner.

3.4 SELECTIVE DEMOLITION FOR ALTERATIONS

- A. Drawings showing existing construction and utilities are based on field observation and existing record documents only.
 - 1 Verify that existing construction and arrangements are as shown.
 - 2 Report discrepancies to SOU before proceeding.
 - 3 Beginning of demolition Work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.
- B. Maintain weatherproof exterior building enclosure throughout the project. Take precautions to prevent water and humidity damage to the building.
- C. Remove existing Work as indicated and as required.
 - 1 Remove items as indicated on drawings.

3.7 DEBRIS AND WASTE REMOVAL

- A. Remove debris, and trash from site on a daily basis.
- B. Remove from site all materials not to be reused on site.
- C. Leave site in clean condition, ready for Owner occupancy.

END OF SECTION

SECTION 033000
CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Topping slabs at patio decks.
- B. Related Sections:
 - 1. Division 01: Administrative, procedural, and temporary work requirements.
 - 2. Section 02 41 19: Selective Demolition
 - 3. Section 07 18 00: Pedestrian Traffic Coating.

1.2 REFERENCES

- A. American Concrete Institute (ACI):
 - 1. 301 - Structural Concrete for Buildings.
 - 2. 305R - Hot Weather Concreting.
 - 3. 306R - Cold Weather Concreting.
 - 4. 308 - Standard Practice for Curing Concrete.
 - 5. 318 - Building Code Requirements for Structural Concrete.
- B. ASTM International (ASTM):
 - 1. C31 - Standard Test Method for Method of Making and Curing Concrete Test Specimens in the Field.
 - 2. C33 - Standard Specification for Concrete Aggregates.
 - 3. C39 - Standard Test Method for Test Method for Compressive Strength of Cylindrical Concrete Specimens.
 - 4. C94 - Standard Specification for Ready-Mixed Concrete.
 - 5. C143 - Standard Test Method for Slump of Portland Cement Concrete.
 - 6. C150 - Standard Specification for Portland Cement.
 - 7. C171 - Standard Specification for Sheet Materials for Curing Concrete.
 - 8. C172 - Standard Test Method for Method of Sampling Freshly Mixed Concrete.
 - 9. C231 - Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method.
 - 10. C260 - Standard Specification for Air-Entraining Admixtures for Concrete.
 - 11. C309 - Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete.
 - 12. C330 - Standard Specification for Lightweight Aggregates for Structural Concrete.
 - 13. C494 - Standard Specification for Chemical Admixtures for Concrete.
 - 14. C618 - Standard Specification for Fly Ash and Raw or Calcined Natural Pozzolans for Use as a Mineral Admixture in Portland Cement Concrete.
 - 15. C1116/1116M - Standard Specification for Fiber-Reinforced Concrete and Shotcrete.
 - 16. D1752 - Standard Specification for Preformed Sponge Rubber and Cork Expansion Joint Fillers for Concrete Paving and Structural Construction.

1.3 SUBMITTALS

- A. Submittals for Review:
 - 1. Concrete Mix Designs: Include:
 - a. Proportions of cement, fine and coarse aggregates, and water.
 - b. Combined aggregate gradation.
 - c. Aggregate specific gravities and gradations.
 - d. Water/cement ratio, design strength, slump, and air content.
 - e. Type of cement and aggregates.
 - f. Air dry density and split cylinder ratio for lightweight concrete.
 - g. Type and proportion of admixtures.
 - h. Special requirements for pumping.
 - i. Range of ambient temperature and humidity for which design is valid.
 - j. Special characteristics of mix requiring precautions in mixing, placing, or finishing techniques to achieve finished product.

1.4 QUALITY ASSURANCE

- A. Concrete Mix Design: In accordance with ACI 301, Method 1 or 2.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Mix and deliver concrete to project ready mixed in accordance with ASTM C94.
- B. Schedule delivery so that pours will not be interrupted for over 15 minutes.
- C. Place concrete on site within 90 minutes after proportioning materials at batch plant.

1.6 PROJECT CONDITIONS

- A. Cold Weather Placement - Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures. Comply with ACI 306R and following requirements:
 - 1. Air temperature at or expected to fall below 40 degrees F within 24 hours after placement, uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50 degrees F and not more than 80 degrees F at point of placement.
 - 2. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
 - 3. Do not use calcium chloride, salt, and other materials containing antifreeze agents or chemical accelerators unless otherwise accepted in mix designs.
- B. Hot Weather Placement - Place concrete in accordance with ACI 305R and following requirements:
 - 1. Cool ingredients before mixing to maintain concrete temperature at time of placement below 90 degrees F. Use chilled mixing water or chopped ice if water equivalent of ice is calculated in total amount of mixing water.
 - 2. If required, cover reinforcing steel with water-soaked burlap so that steel temperature will not exceed ambient air temperature.
 - 3. Fog spray forms, reinforcing steel, and subgrade just before concrete is placed.
 - 4. Use water-reducing retarding admixture when required by high temperatures, low humidity, or other adverse placing conditions.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturers - Concrete Chemicals:
 - 1. BASF Corporation. (www.buildingsystems.basf.com)
 - 2. Dayton Superior. (www.daytonsuperior.com)
 - 3. W. R. Meadows, Inc. (www.wrmeadows.com)
 - 4. Meadow Burke. (www.meadowburke.com)
 - 5. Nox-Crete Products Group. (www.nox-crete.com)
- B. Substitutions: Under provisions of Section 016000.

2.2 MATERIALS

- A. Portland Cement: ASTM C150, Type II or III, gray color.
- B. Aggregates:
 - 1. Fine: ASTM C33, clean, hard, durable, uncoated natural sand, free from silt, loam, and clay.
 - 2. Coarse: ASTM C33, clean, hard, durable, uncoated crushed stone, maximum size No. 467, Table No. 2.
 - 3. Lightweight: ASTM C330, expanded shale or clay produced by rotary kiln method.
- C. Fly Ash: ASTM C618, maximum 2 percent loss on ignition.

2.3 ACCESSORIES

- A. Water: Clean and potable.
- B. Admixtures:
 - 1. Water reducing or water reducing/set retarding: ASTM C494, Type A or D.
 - 2. Air entraining: ASTM C260.
- C. Expansion Joint Filler: ASTM D1752, non-asphaltic type.
- D. Non-Shrink Grout: Premixed, consisting of non-metallic aggregate, cement, water reducing and plasticizing agents; minimum 5,000 psi compressive strength at 7 days.
- E. Bonding Agent: Two component modified epoxy resin.
- F. Curing Compound: ASTM C309, water-based type.
- G. Curing Paper: ASTM C171, waterproof paper or polyethylene film.

2.4 MIXES

- A. Proportions: In accordance with ACI 301.
- B. Design concrete to yield characteristics scheduled at end of Section.
- C. Air Entrained Concrete: Provide air entraining admixture to produce 4 to 6 percent air by volume of concrete.
- D. Use accelerating admixture in cold weather only when approved by Architect. Use of admixtures will not reduce cold weather placement requirements.
- E. Fly Ash Content: Not permitted.

PART 3 EXECUTION

3.1 PREPARATION

- A. Notify Owner a minimum 24 hours prior to placing concrete.
- B. Coordinate with plumbing contractor to ensure drains and overflows are positioned and secured.
- C. Remove water and debris from forms and excavations.
- D. Prepare previously placed concrete surfaces by cleaning with steel wire brush and applying bonding agent in accordance with manufacturer's instructions.

3.2 PLACEMENT OF CONCRETE

- A. Place concrete in accordance with ACI 301 and ACI 318.
- B. Ensure reinforcement, inserts, and embedded parts are not disturbed during concrete placement.
- C. Deposit concrete as nearly as possible in its final position to minimize handling and flowing.
- D. Place concrete continuously between predetermined expansion, control, and construction joints. E. Do not place partially hardened, contaminated, or retempered concrete.
- F. Do not allow concrete to free fall over 8 feet; provide tremies, chutes, or other means of conveyance.
- G. Consolidate concrete with mechanical vibrating equipment. Hand compact in corners and angles of forms.
- H. Screed slabs level, to flatness tolerance of 1/8 inch in 10 feet.

3.3 PROTECTION

- A. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.
- B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.
- C. Keep forms sufficiently wet to prevent cracking of concrete or loosening of form joints.

3.4 CURING

- A. Cure concrete in accordance with ACI 308:
 - 1. Horizontal surfaces:
 - a. Surfaces to receive additional toppings or setting beds: Use curing paper method.
- B. **Curing Compound Method:**
 - 1. **Not permitted for this project.**
- C. Curing Paper Method:
 - 1. Spread curing paper over surfaces, lapping ends and sides minimum 4 inches; maintain in place by use of weights.
 - 2. Remove paper after curing.
- D. Wet Curing Method: Spray water over surfaces and maintain wet for 7 days.

3.5 CLEANING

- A. Remove efflorescence, stains, oil, grease, and foreign materials from exposed surfaces.

3.6 FIELD QUALITY CONTROL

- A. Testing and Inspection Services:
 - 1. Not required for this project.

3.7 CONCRETE SCHEDULE

Minimum 28 Day Compressive Strength	Max. W/CM Ratio	Max. Aggregate Size	Uses
3,500 psi	0.50	¾"	Deck topping slabs

END OF SECTION

SECTION 055000 METAL FABRICATIONS

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Guardrails.
- B. Related Sections:
 - 1. Division 01: Administrative, procedural, and temporary work requirements.
 - 2. Section 086100 Sheet Metal Roofing
 - 3. Section 086200 Sheet Metal Flashing & Trim

1.2 REFERENCES

- A. American Architectural Manufacturers Association (AAMA):
 - 1. 2603 - Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Architectural Extrusions and Panels.
 - 2. 2604 - Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Architectural Extrusions and Panels.
 - 3. 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Architectural Extrusions and Panels.
- B. American Welding Society (AWS):
 - 1. D1.1/D1.1M - Structural Welding Code - Steel.
- C. ASTM International (ASTM):
 - 1. A36/A36M - Standard Specification for Carbon Structural Steel.
 - 2. A108 - Standard Specification for Steel Bars, Carbon, Cold-Finished, Standard Quality.
 - 3. A283 - Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates, Shapes and Bars.
 - 4. A307 - Standard Specification for Carbon Steel Externally Threaded Standard Fasteners.
 - 5. A354 - Standard Specification for Quenched and Tempered Alloy Steel Bolts, Studs, and Other Externally Threaded Fasteners.
 - 6. A500 - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
 - 7. A501 - Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing.
 - 8. A510 - Standard Specification for General Requirements for Wire Rods and Coarse Round Wire, Galvanized Steel.
 - 9. A1008/A1008M - Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability.
 - 9. A1011/A1011M - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength, Low-Alloy and High-Strength Low-Alloy with Improved Formability.
 - 10. B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
 - 11. B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
 - 12. B241 - Standard Specification for Aluminum-Alloy Seamless Pipe and Seamless Extruded Tube.

- 13. E985 - Standard Specification for Permanent Metal Railing Systems and Rails for Buildings.
- D. National Association of Architectural Metal Manufacturers (NAAMM):
 - 1. AMP 503 - Finishes for Stainless Steel.
 - 2. MBG 531 - Metal Bar Grating Manual.
- E. Society for Protective Coatings (SSPC) - Painting Manual.

1.3 SUBMITTALS

- A. Submittals for Review:
 - 1. Shop Drawings: Show dimensions, metal thicknesses, finishes, joints, attachments, and relationship of work to adjacent construction.

1.4 QUALITY ASSURANCE

- A. Fabricator Qualifications: Minimum 5 years documented experience in work of this Section.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Store steel above ground on platforms, skids, or other supports; separate with wooden separators.
- B. Protect steel from corrosion.
- C. Prevent damage to prime coat and galvanized coatings.

PART 2 PRODUCTS

2.1 MATERIALS - STEEL

- A. Shapes: ASTM A36/A36M.
- B. Plate: ASTM A283.
- C. Sheet: ASTM A1008/A1008M.
- D. Pipe: ASTM A501.
- E. Tube: ASTM A500.
- F. Bars: ASTM A108.

2.2 ACCESSORIES

- A. Exposed Screws: Same material as metal being fastened; Phillips flat head, countersunk, unless noted otherwise.
- B. Bolts: ASTM A307, hexagonal head type.
- C. Primer Paint: SSPC Paint 15, Type 1, red oxide.
- D. Anchoring Cement: Non-shrink cementitious type.

2.3 FABRICATION

- A. Fit and shop assemble items in largest practical sections, for delivery to site.
- B. Fabricate items with joints tightly fitted and secured.
- C. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.
- D. Exposed Mechanical Fastenings: Flush countersunk screws or bolts, unobtrusively located, consistent with design of component except where specifically noted otherwise.

- E. Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.
- F. Conceal fastenings where possible.
- G. Welding to conform to AWS D1.1/D1.1M:
 - 1. Use welds for permanent connections where possible. Grind exposed welds smooth.
 - 2. Tack welds prohibited on exposed surfaces.
- H. Powder coat completed guardrail panels. Standard color to be selected by SOU.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install items in accordance with approved Shop Drawings.
- B. Install components plumb, level, and rigid.
- C. Welding: AWS D1.1/D1.1M. Grind and fill exposed welds; finish smooth and flush.
- D. Install sleeved components with anchoring cement.
- E. Prevent contact of exterior aluminum and dissimilar metals by use of zinc rich paint, bituminous coating, or non-absorptive gaskets.

3.2 ADJUSTING

- A. Clean and touch up damaged primer paint with same product as applied in shop.

3.3 CLEANING

- A. Clean metal fabrications; remove stains, spots, and minor abrasions without etching powder coated finishes.

END OF SECTION

071800 PEDESTRIAN TRAFFIC COATINGS

PART 1 - GENERAL

1.1 SECTION INCLUDES

1. Polyurethane methacrylate and polymethyl methacrylate technology traffic coatings for pedestrian traffic applications

1.2 RELATED REQUIREMENTS

1. Division 01: Administrative, procedural, and temporary work requirements.
2. Section 03 33 00 "Cast-in-Place Concrete" for moisture curing of concrete traffic coating substrate.
3. Section 07 92 00 "Joint Sealants" for joint sealants and accessories and joint preparation.
4. Section 221400 "Facility Storm Drainage" for deck and overflow drains.

1.3 REFERENCES

- A. References, General: Versions of the following standards current as of the date of issue of the project apply to the Work of this Section.
- B. ASTM International (ASTM): www.astm.org:
 1. ASTM C920 - Standard Specification for Elastomeric Joint Sealants
 2. ASTM C1127 - Standard Guide for Use of High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane with an Integral Wearing Surface
 3. ASTM C1193 - Standard Guide for Use of Joint Sealants
 4. ASTM D4258 - Standard Practice for Surface Cleaning Concrete for Coating
 5. ASTM D4259 - Standard Practice for Abrading Concrete
 6. CSA S413 for Parking Structures
 7. ASTM C957 - Standard Specification for High-Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane with Integral Wearing Surface
- C. International Concrete Repair Institute (ICRI): www.icri.org:
 1. ICRI 310.2R - Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays, and Concrete Repair

1.4 ADMINISTRATIVE REQUIREMENTS

- A. Preinstallation Conference: Conduct conference at Project Site.
 1. Review requirements for traffic coating products and installation, including surface preparation, substrate conditions, expansion joints as required, project and manufacturer's details, installation procedures, mockups, testing and inspection requirements, protection and repairs, and coordination and sequencing of traffic coating work with work of other Sections.

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of traffic coating product and expansion joint accessory specified, indicating compliance with requirements.
- B. Shop Drawings: Show locations for traffic coating system components. Show details for each type of substrate, movement joints, corners, and edge conditions, including penetrations, transitions, and terminations.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: A manufacturer-approved firm with minimum three (3) years' experience in installation of specified or similar products in successful use on similar projects. Specifier: Retain "Approval of Manufacturers and Comparable Products" Paragraph below to provide control over qualifying of substituted manufacturers.

1.7 DELIVERY, STORAGE AND HANDLING

- A. Accept materials on site in manufacturer's unopened original packaging.
- B. Store products in weather protected environment, clear of ground and moisture, within temperature ranges recommended by traffic coating manufacturer.

1.8 ENVIRONMENTAL REQUIREMENTS

- A. Environmental Limitations: Apply traffic coating within the range of ambient and substrate temperatures recommended by traffic coating manufacturer.
 - 1. Protect substrates from environmental conditions that affect system performance.
 - 2. Do not apply traffic coating (or expansion joint accessories if applicable) to a damp or wet substrate or during snow, rain, fog, or mist.

1.9 SCHEDULING

- A. Schedule work so traffic coating system (including expansion joints if applicable) applications may be inspected prior to concealment.

1.10 WARRANTY

- A. Applicator: Company specializing in performing the work of this section qualified by system manufacturer for warranted membrane installation. Applicator shall submit the following certification for review:
 - 1. Applicator shall submit documentation from the membrane manufacturer to verify contractor's status as a qualified approved applicator for warranted installations.

- B. Special Manufacturer's Warranty: Manufacturer's standard form in which traffic coating manufacturer agrees to furnish traffic coating material to repair or replace those materials installed according to manufacturer's written instructions that exhibit material defects or otherwise fail to perform as specified under normal use within warranty period specified.
 - 1. Access for Repair: Owner shall provide unimpeded access to the Project and the traffic coating system for purposes of testing, leak investigation, and repair,
 - 2. Cost Limitation: Manufacturer's obligation for repair or replacement shall be limited to the original installed cost of the work.
 - 3. Warranty Period: Twenty years from date of Substantial Completion.
- C. Special warranties specified in this article exclude deterioration or failure of traffic coating materials from the following:
 - 1. Movement of the structure caused by structural settlement or stresses on the traffic coating exceeding manufacturer's written specifications for elongation.
 - 2. Mechanical damage caused by outside agents.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Basis-of-Design Products: Provide traffic coating products manufactured by **Tremco, Inc., Commercial Sealants and Waterproofing Division**, Beachwood OH; (866) 321-6357; email: techresources@tremcoinc.com; www.tremcosealants.com, Source Limitations: Provide traffic coating system materials and accessory products from single-source manufacturer.
- B. Substitutions per Section 016000.

2.2 PERFORMANCE REQUIREMENTS

- A. General: Traffic coating system shall be capable of performing as a continuous watertight installation and as a moisture drainage plane transitioned to adjacent flashings and discharging water to the structure exterior. Traffic coating shall accommodate normal substrate movement and seal expansion and control joints, construction material transitions, opening transitions, penetrations, and perimeter conditions without resultant moisture deterioration.
- B. Compatibility: Provide traffic coating system materials that are compatible with one another and with adjacent materials under conditions of service and application required, as demonstrated by traffic coating manufacturer based on testing and field experience.

2.3 TRAFFIC COATING FOR PEDESTRIAN TRAFFIC, EXTREME WEAR SYSTEM (EWS)

- A. Traffic Coating: Manufacturer's polyurethane methyl methacrylate system for extreme exterior exposure conditions, traffic-bearing, seamless, high-solids-content, cold liquid-applied, elastomeric, waterproofing membrane system with integral wearing surface for pedestrian traffic.

1. Basis of Design Products: Tremco, Inc., Vulkem EWS Pedestrian System
- B. Primer: Two-component, chemically curing methyl methacrylate
 1. Tremco PUMA Primer
- C. Base Coats: Polyurethane methacrylate
 1. Tremco PUMA BC or Tremco PUMA BC LM
- D. Top Coat: Methyl Methacrylate
 1. Tremco PUMA TC
 2. Color: As selected by Architect from manufacturer's full range.
- E. Aggregate: Manufacturer's standard aggregate for each use indicated of particle sizes, shape, and minimum hardness recommended in writing by traffic-coating manufacturer.
 1. 30-50 Mesh silica sand for the primer
 2. 16-30 Mesh silica sand for the top coat

2.4 ACCESSORY MATERIALS

- A. General: Accessory materials as described in manufacturer's written installation instructions, recommended to produce complete traffic coating system meeting performance requirements, and compatible with traffic coating material and adjacent materials.
- B. Initiator; Benzoyl Peroxide
 1. Tremco PUMA Initiator/Tremco PUMA Initiator+
- C. Cleaner; One component methyl methacrylate
 1. Tremco PUMA Cleaner
- D. Crack and Joint Detailing Coating
 1. Tremco PUMA BC LM and/or Tremco PUMA WC with silica
- E. Vertical and Ramp Application Coating
 1. Tremco PUMA BC R
- F. Expansion Joint Pre-compressed or Closed Cell, Monolithic Foam System. Foam Structure Must not Contain Unbonded Foam Laminations;
 1. Willseal® 250 for use in both vehicular and pedestrian traffic applications.
 2. Willseal® 250-R for use in both vehicular and pedestrian traffic applications requiring additional point load resistance.
 3. Willseal® 250-CR for use in both vehicular and pedestrian traffic applications subject to chemical exposure, reference Willseal list of approved chemicals.
 4. Willseal® Coreseal for use in both vehicular and pedestrian traffic applications requiring +/-25% movement capability, closed cell, and a lightweight seal.

5. Willseal® Color Coreseal – H for use in both vehicular and pedestrian traffic applications requiring +/-25% movement capability, closed cell, and a lightweight seal. For vertical applications refer to Color Coreseal – V.
6. Willseal® Color Coreseal – CM for use in both vehicular and pedestrian traffic applications requiring +/-25% movement capability, closed cell, and a lightweight seal with an integrated waterproofing membrane. For vertical applications refer to Color Coreseal – V.
7. Willseal® FR-H - for use in both vehicular and pedestrian traffic applications requiring hourly fire rated systems. For vertical applications refer to Willseal® FR-V.
8. Willseal® approved accessory sealants as per Willseal application instructions.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Surface Condition: Before applying traffic coating materials and system accessories, examine substrate and conditions to ensure substrates are fully cured, smooth, and free from high spots, depressions, loose and foreign particles and other deterrents to adhesion, and conditions comply with manufacturer's written recommendations.
 1. Verify concrete surfaces are visibly dry, have cured for time period recommended by traffic coating manufacturer, and are free from release agents, curing agents, laitance, and other contaminates.
 2. Test surfaces following cleaning and abrasion specified below.
 - a. Test for capillary moisture by method recommended in writing by traffic-coating manufacturer.
 - b. Test for traffic coating adhesion per manufacturer's recommended method.
 - c. Notify Architect in writing of unsatisfactory conditions.
- B. Proceed with installation once unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Surface Preparation: Clean, prepare, and treat substrates in accordance with ASTM C1127 and traffic coating manufacturer's written instructions.
 1. Remove contaminants, curing compounds, and film-forming coatings from substrates.
 2. Remove projections and excess materials and fill voids with manufacturer's recommended substrate patching material.
 3. Mechanically abrade concrete surfaces by method of shot blasting to a uniform profile in accordance with ASTM D4259 and meeting ICRI Surface Profile CSP 3. Do not acid etch.
 4. Clean prepared surfaces in accordance with ASTM D4258.
- B. Protect adjacent finished surfaces by masking. Mask termination point on vertical surfaces. Protect weep holes and drains.
- C. For accessory materials, follow manufacturers application instructions.

3.3 TERMINATIONS AND PENETRATIONS

- A. Prepare vertical and horizontal surfaces at horizontal to vertical transitions, terminations, joints, and penetrations through traffic coatings in accordance with ASTM C1127 and manufacturer's written instructions, using accessory materials specified.
- B. At terminations of traffic coating exposed to traffic, rout 1/4 by 1/4 inch keyway in concrete.
- C. Detail Preparation: Prepare non-moving shrinkage cracks, large cracks, construction joints, expansion joints, projections and protrusions, penetrations, drains, and changes in plane in accordance with manufacturer's written instructions and details, .
 - 1. Prepare joints and cracks in substrate in accordance with ASTM C1127 and ASTM D4258 and manufacturer's written instructions.
- D. Joint Coating Installation: Comply with manufacturer's written instructions. Allow joint coatings to cure adequately before coating with traffic coating.
 - 1. Provide coating cants at penetrations and at horizontal-to-vertical intersections. Tool coating material to form 45 degree angle transition. Penetrations must be grouted solid at all instances.
 - 2. Rout and fill cracks with coating and tool flush with surface.
 - 3. Feather edges of joint coating applications.
 - 4. Allow coating to cure.
 - 5. Fill expansion joints less than 1" with backer rod and joint sealant contact Tremco for sealant recommendation. Do not apply traffic coating over expansion joints.
 - 6. Fill expansion joints greater than 1" with specified Willseal Expansion Joint material, contact Tremco for sealant recommendation. Do not apply traffic coating over expansion joints.

3.4 PEDESTRIAN TRAFFIC-COATING APPLICATION

- A. Primer: Prime surfaces to receive traffic coating system. Allow to cure before proceeding.
- B. Apply traffic coating according to manufacturer's written instructions.
 - 1. Verify that wet film thickness of each coat complies with requirements every 100 sq. ft.
- C. Apply **primer coat, base coat, armor coat and top coat with 6" cove base**, per manufacture's written installation instructions
- D. Apply traffic coatings to prepared wall terminations and vertical surfaces to height indicated; omit aggregate on vertical surfaces.
- E. Cure traffic coatings. Prevent contamination and damage during application and curing stages.

3.5 CLEANING AND PROTECTING

- A. Clean spills, stains, and overspray resulting application utilizing cleaning agents recommended by manufacturers of affected construction. Remove masking materials.
- B. Protect traffic coating from damage from subsequent work.
- C. Protect layers in the traffic coating system that are not UV stable from exposure to UV light for period in excess of that acceptable to traffic coating manufacturer; replace overexposed materials and retest.

END OF SECTION

SECTION 075419
POLYVINYL-CHLORIDE (PVC) MEMBRANE ROOFING

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
1. Substrate Preparation.
 2. Membrane Roofing. Mechanically fastened.
 3. ¼" Densdeck underlayment, mechanically fastened.
 4. Prefabricated flashings, corners, parapets, stacks, vents, boots and related details.
 6. Fasteners, adhesives, sealants, drain guards and other accessories required for a complete roofing installation.
 7. Walkway pads where indicated on drawings.
- B. Related Sections:
1. Division 01: Administrative, procedural, and temporary work requirements.
 2. Section 02 41 19 - Selective Demolition.
 3. Section 07 62 00 - Sheet Metal Flashing and Trim.
 4. Section 07 92 00 – Joint Sealants.

1.2 REFERENCES

- A. ASTM INTERNATIONAL (ASTM)
1. (2019) Standard Test Methods for Coated Fabrics (D751)
 2. (2021) Standard Specification for Poly(Vinyl Chloride) Sheet Roofing (D4434/D4434M)
 3. (2022) Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board (C1289)
 4. (2020) Standard Test Methods for Fire Tests of Roof Coverings (E108)
 5. (2020) Standard Test Methods for Fire Tests of Building Construction and Materials (E119)
- B. UL SOLUTIONS (UL)
1. (2021) UL Roofing Systems (TGFU.R10128)
- C. AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE)
1. (2014) Minimum Design Loads for Buildings and Other Structures (ASCE Standard - ASCE/SEI 7-10)
 2. (2017) Minimum Design Loads and Associated Criteria for Buildings and Other Structures (ASCE Standard - ASCE/SEI 7-16)
 3. (2022) Minimum Design Loads and Associated Criteria for Buildings and Other Structures (ASCE Standard - ASCE/SEI 7-22)
- D. NATIONAL ROOFING CONTRACTORS ASSOCIATION (NRCA)
1. (2019) NRCA Roofing Manual - Membrane Systems

1.3 SYSTEM DESCRIPTION

- A. 60 mil Polyvinyl-Chloride (PVC) membrane over cover board, mechanically fastened to existing metal decks.

1.4 PERFORMANCE REQUIREMENTS

- A. OSSC section 2603.3 and 2603.4.1.5.
- B. FM 4470: Roof Assembly Classification of Class 1 Construction, windstorm classification of 1-90, in accordance with FM Construction Bulletin 1-28.
- C. UL 1256: Standard for Fire Test of Roof Deck Constructions.

1.5 SUBMITTALS

- A. Refer to Section 013300.
- B. Submit product data sheets to be used, with the following information included:
 - 1. Preparation instructions and recommendations
 - 2. Storage and handling requirements and recommendations
 - 3. Installation methods
 - 4. Maintenance requirements
- C. Submit Shop Drawings: Indicate overall membrane layout, field seam locations, joint or termination detail conditions, and location of fasteners.
- D. Installer Certification: Certification from the roofing system manufacturer that Installer is approved, authorized, and/or licensed by manufacturer to install roofing system.
- E. Manufacturer's warranties. Submit sample documents for 20-year NDL system

1.6 QUALITY ASSURANCE

- A. Perform work in accordance with manufacturer's installation instructions.
- B. Manufacturer Qualifications: A manufacturer specializing in the production of PVC membrane system that has been approved by and is inspected by Underwriters Laboratories.
- C. Installer Qualifications: Company specializing in installation of roofing systems similar to those specified in this project and approved by the roofing system manufacturer.
- D. Source Limitations: Obtain components for membrane roofing system from roofing membrane manufacturer.
- E. There shall be no deviations from the roof membrane manufacturer's specifications or the approved shop drawings without the prior written approval of the manufacturer.
- F. Perform Work in accordance with NRCA Roofing and Waterproofing Manual.

1.7 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum ten years documented experience.
- B. Applicator: Company specializing in performing Work of this section with minimum three years documented experience and approved by manufacturer.

1.8 REGULATORY REQUIREMENTS

- A. Conform to applicable code for roof assembly fire hazard, wind uplift, and cool roof requirements.

- B. Fire Hazard Requirements: Provide membrane roofing materials with the following fire-test-response characteristics. Materials shall be identified with appropriate markings of applicable testing and inspecting agency.
 - 1. Class A
 - 2. Fire-test-response standard: Comply with ASTM E108 for application and roof slopes indicated.
 - 3. Fire-Resistance Ratings: Comply with ASTM E119 for fire-resistance-rated roof assemblies of which roofing system is a part.
 - 4. Conform to applicable code for roof assembly fire hazard requirements.
- C. Wind Uplift Requirements: Roofing System Design: Provide a roofing system designed to resist uplift pressures calculated according to the current edition of ASCE/SEI 7, Minimum Design Loads and Associated Criteria for Buildings and Other Structures.
- D. Cool Roof Requirements: Conform to IECC (International Energy Conservation Code) and IGCC (International Green Construction Code) cool roof requirements.

1.9 PRE-INSTALLATION MEETING

- A. Per Section 013100 - Administrative Requirements
- B. Convene minimum one week prior to commencing Work of this section.
- C. Review methods and procedures related to roof deck construction and roofing system including, but not limited to, the following:
 - 1. Meet with Owner, Owner's insurer if applicable, testing and inspecting agency representative if applicable, roofing installer, roofing system manufacturer's representative, deck installer, and installers whose work interfaces with or affects roofing including installers of roof accessories and roof-mounted equipment.
 - 2. Review and finalize construction schedule and verify availability of materials, installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 - 3. Examine deck substrate conditions and finishes for compliance with requirements, including flatness and fastening.
 - 4. Review structural loading limitations of roof deck during and after roofing.
 - 5. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing system.
 - 6. Review governing regulations and requirements for insurance and certificates if applicable.
 - 7. Review temporary protection requirements for roofing system during and after installation.
 - 8. Review roof observation and repair procedures after roofing installation.
 - 9. Review existing roof manufacturer's recycling program and return roofing system to the manufacturer for recycling.

1.10 DELIVERY, STORAGE, AND HANDLING

- A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, and directions for storing and mixing with other components.

- B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.
- C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.
- D. Store roof materials and place equipment in a manner to avoid permanent deflection of deck.
- E. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.11 ENVIRONMENTAL REQUIREMENTS

- A. Section 016000 - Product Requirements.
- B. Do not apply roofing membrane during inclement weather ambient temperatures below 40 degrees F or above 100 degrees F without proper weather protection.
- C. Do not apply roofing membrane to damp or frozen deck surface.
- D. Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed during same day.

1.12 COORDINATION

- A. See Section 013100 - Administrative Requirements: Coordination and project conditions.

1.13 WARRANTY

- A. Contractor Warranty: The contractor shall warrant the roof application with respect to workmanship and proper application for two (2) years from the date of warranty certification by the roof membrane manufacturer. Should any leaks covered under the warranty occur during this period, corrective action shall be taken by the contractor to repair the roof to the satisfaction of the owner and the roof membrane manufacturer. All corrective work shall be done at no cost to the owner or roofing manufacturer.
- B. Manufacturer Warranty: Must be no-dollar limit type and provide for completion of repairs, replacement of membrane or total replacement of the roofing system at the then-current material and labor prices throughout the life of the warranty. In addition, the warranty must meet the following criteria:
 1. Warranty Period: **20 years** from date issued.
 2. No exclusions for damage caused by ponded water or biological growth, or for incidental or consequential damages.
 3. Issued direct from and serviced by the roof membrane manufacturer.
 4. Transferable for the full term of the warranty.
 5. No additional charge for the warranty.
 6. The warranty shall extend to the outside face of the parapet walls

PART 2 PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Duro-Last Roofing, Inc.
- B. Carlisle SynTec, Inc.
- C. Sika Sarnafil
- D. Substitutions: Not permitted

2.2 COMPONENTS

- A. Basis-of-Specification is the DuroLast 60 mil PVC system. Equal products by Carlisle and Sike-Sarnafil are approved.
- B. Membrane: Reinforced PVC (Polyvinyl Chloride) membrane, 60 mil thickness, mechanically fastened, maximum size sheets as required for job conditions. **White color.**
- C. Insulation:
 - 1 No modifications to existing insulation required for this project.
- D. Cover Board: ¼" densdeck underlayment as approved by the manufacturer.
- E. Attachment Type: Mechanically fastened.
- E. Walkway Pads: Duro-Last Roof Trak III heat weldable walkway rolls, 36 inches wide x maximum available roll length. Walkways are to be installed where indicated on the drawing.
- F. Accessories: All adhesives, sealants, mastic, night seal, primers, separation sheets, vapor retarders, solvents, cleaners, fasteners, drain boots, clamp rings, dome strainers, stack boots, pre-formed corners, backer rod, cant strips, termination bars, edge metal systems and other materials required for a complete system and meeting all requirements of the warranty.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that the surfaces and site conditions are ready to receive work.
- B. Verify that the deck is supported and secured.
- C. Verify that the deck is clean and smooth, free of depressions, waves, or projections, and properly sloped to drains, valleys, eaves, scuppers or gutters.
- D. Verify that the deck surfaces are dry and free of standing water, ice or snow.
- E. Verify that all roof openings or penetrations through the roof are solidly set.
- F. If substrate preparation is the responsibility of another contractor, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Surfaces shall be clean, smooth, free of fins, sharp edges, loose and foreign material, oil, grease, and bitumen.
- D. Tearing off Existing Single-Ply System:
 - 1. Remove existing single-ply membrane and return to the manufacturer for recycling.

3.3 INSTALLATION

A. Insulation:

1. General Requirements

- a. Existing tapered insulation reused for this project.

2. ¼" densdeck

- a. Use only fasteners, stress plates and fastening patterns accepted for use by the roof manufacturer. Fastening patterns must meet applicable design requirements.
- b. Install fasteners in accordance with the roof manufacturer's requirements. Fasteners that are improperly installed must be replaced or corrected.
- c. Install all layers in parallel courses with end joints staggered 50% and adjacent boards butted together with no gaps greater than ¼ inch.

B. PVC Thermoplastic Membrane:

1. Install membrane in accordance with the roof manufacturer's requirements.
2. Cut membrane to fit neatly around all penetrations and roof projections.
3. Use only fasteners, stress plates and fastening patterns accepted for use by the roof manufacturer. Fastening patterns must meet applicable design requirements.
4. Install fasteners in accordance with the roof manufacturer's requirements. Fasteners that are improperly installed must be replaced or corrected.
5. Mechanically fasten membrane to the structural deck utilizing fasteners and fastening patterns in accordance with the roof manufacturer's requirements.
6. Weld overlapping sheets together using hot air. Minimum weld width is 1-1/2 inches.
7. Check field welded seams for continuity and integrity and repair all imperfections by the end of each work day.

C. Flashings:

1. Complete all flashings and terminations as indicated on the drawings and in accordance with the membrane manufacturer's requirements.
2. Provide securement at all membrane terminations at the perimeter of each roof level, roof section, curb flashing, skylight, expansion joint, interior wall, penthouse, and other similar condition.
 - a. Do not apply flashing over existing thru-wall flashings or weep holes.
 - b. Secure flashing on a vertical surface before the seam between the flashing and the main roof sheet is completed.
 - c. Extend flashing membrane a minimum of 6 inches (152 mm) onto the main roof sheet beyond the mechanical securement.
 - d. Use care to ensure that the flashing does not bridge locations where there is a change in direction (e.g. where the parapet meets the roof deck).
3. Penetrations:
 - a. Flash all pipes, supports, soil stacks, cold vents, and other penetrations passing through the roofing membrane in accordance with the membrane manufacturer's requirements.
 - b. Utilize custom prefabricated flashings supplied by the membrane manufacturer whenever possible.

- c. Existing Flashings: Remove when possible to allow new flashing to terminate directly to the penetration.
 4. Pipe Clusters and Unusual Shapes:
 - a. Clusters of pipes or other penetrations which cannot be sealed with prefabricated membrane flashings shall be sealed by surrounding them with a prefabricated vinyl-coated metal pitch pan and sealant supplied by the membrane manufacturer.
 - b. Vinyl-coated metal pitch pans shall be installed, flashed and filled with sealant in accordance with the membrane manufacturer's requirements.
 - c. Pitch pans shall not be used where prefabricated or field fabricated flashings are possible.
- D. Roof Drains: Coordinate installation of roof drains and vents.
 1. Drain Assemblies with Clamping Rings:
 - a. Remove existing roofing system materials from drain bowl and clamping ring.
 - b. The membrane must extend beyond the inside of the clamping ring.
 - c. Use a manufacturer supplied or approved sealant (1/2 tube minimum) between the membrane and drain bowl assembly.
 - d. After the membrane is properly installed onto the bowl and the clamping ring set in place, all bolts securing the ring must be installed to provide constant, even compression on the sealant. If bolts are broken or missing, replacements must be installed.
 2. Drain Boots:
 - a. Remove existing flashing and asphalt at existing drains in preparation for sealant and membrane.
 - b. Use a manufacturer supplied or approved sealant (1/2 tube minimum) to the outside of the drain boot and insert it into the drain.
 - c. Fasten membrane around the perimeter of the drain with the same fastening pattern as the field membrane, no less than 1 fastener per drain.
 - d. Install a pair of composite drain rings (CDRs) to compress the boot to the pipe. Ensure the CDR openings face in opposite directions.
 - e. Secure the manufacturer's drain guard over the opening by heat welding the attachment tabs to the roof membrane.
- E. Edge Details:
 1. Provide edge details as indicated on the Drawings. Install in accordance with the membrane manufacturer's requirements.
 2. Join individual sections in accordance with the membrane manufacturer's requirements.
 3. Coordinate installation of metal flashing and counter flashing.
 4. Manufactured Roof Specialties: Coordinate installation of copings, counter flashing systems, gutters, downspouts, and roof expansion assemblies.
- F. Walkways:
 1. Install walkways in accordance with the membrane manufacturer's requirements.
 2. Provide walkways where indicated on the Drawings.

3. Install walkway pads at roof hatches, access doors, rooftop ladders and all other traffic concentration points regardless of traffic frequency. Provided in areas receiving regular traffic to service rooftop units or where a passageway over the surface is required.
4. Do not install walkways over flashings or field seams until manufacturer's warranty inspection has been completed.

G. Water Cut-Offs:

1. Provide water cut-offs on a daily basis at the completion of work and at the onset of inclement weather.
2. Provide water cut-offs to ensure that water does not flow beneath the completed sections of the new roofing system.
3. Remove water cut-offs prior to the resumption of work.
4. The integrity of the water cut-off is the sole responsibility of the roofing contractor.
5. Any membrane contaminated by the cut-off material shall be cleaned or removed.

3.4 FIELD QUALITY CONTROL

- A. The membrane manufacturer's representative shall provide a comprehensive final inspection after completion of the roof system. All application errors shall be addressed and final punch list completed.

3.5 PROTECTION

- A. Protect installed roofing products from construction operations until completion of project.
- B. Where traffic is anticipated over completed roofing membrane, protect from damage using durable materials that are compatible with membrane.
- C. Repair or replace damaged products after work is completed.

END OF SECTION

SECTION 076100
SHEET METAL ROOFING

GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Architectural standing seam metal roofing panels.
 - 2. Flashings, trim, anchorage and accessories.
- B. Related Sections:
 - 1. Division 01: Administrative, procedural, and temporary work requirements.
 - 2. Section 076200 -Sheet Metal Flashing & Trim
 - 3. Section 079200 - Joint Sealers.

1.2 REFERENCES

- A. American Architectural Manufacturers Association (AAMA):
 - 1. 621 - Voluntary Specifications for High Performance Organic Coatings on Coil Coated Architectural Hot Dipped Galvanized (HDG) and Zinc-Aluminum Coated Steel Substrates.
 - 2. 2604 - Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Architectural Extrusions and Panels.
 - 3. 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Architectural Extrusions and Panels.
- B. American Society of Civil Engineers (ASCE) 7 - Minimum Design Loads for Buildings and Other Structures.
- C. ASTM International (ASTM):
 - 1. A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy Coated (Galvannealed) by the Hot-Dip Process.
 - 2. A755/A755M - Standard Specification for Steel Sheet, Metallic Coated by the Hot-Dip Process and Pre-painted by the Coil-Coating Process for Exterior Exposed Building Products.
 - 3. A792/A792M - Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.
 - 4. B32 - Standard Specification for Solder Metal.
 - 5. B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
 - 6. B370 - Standard Specification for Copper Sheet and Strip for Building Construction.
 - 7. C1549 - Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer.
 - 8. D226 - Standard Specification for Asphalt Saturated Organic Felt Used in Roofing and Waterproofing.
 - 9. D412 - Standard Test Method for Vulcanized Rubber and Thermoplastic rubbers and Thermoplastic Elastomers - Tension.
 - 10. D1970 - Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection.
 - 11. E1592 - Standard Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference.
 - 12. E1980 - Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces.

D. Energy Star- Architectural Sheet Metal Manual.

1.3 SYSTEM DESCRIPTION

- A. Design Requirements; design roof system to withstand:
1. Live and dead loads in accordance with Building Code.
 2. Minimum wind pressures in accordance with Building Code, with maximum allowable deflection of L/240, tested in accordance with ASTM E1592.
 3. Water Infiltration Under Static Pressure: Tested with sidelap sealant per ASTM E1646.
 - a) No leakage through panel joints at 15 psf.
 4. Movement caused by an ambient temperature range of 120 degrees F and a surface temperature range of 180 degrees F.

1.4 SUBMITTALS

- A. Submittals for Review:
1. Shop Drawings: Include dimensioned layout showing locations of accessories, gage of metal, fastening methods, provisions for expansion and contraction, and details of joints.
 2. Warranty: Sample warranty form.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Minimum 5 years documented experience in work of this Section.

1.6 PROJECT CONDITIONS

- A. Do not form sheet metal at ambient temperatures less than 50 degrees F.
- B. Do not apply underlayment at ambient or surface temperatures less than 40 degrees F or on wet or frozen substrate.
- C. Do not install roofing on wet or frozen substrate.

1.7 WARRANTIES

- A. Furnish manufacturer's standard 25-year warranty stating the following:
1. Architectural fluorocarbon finish:
 - a. Will be free of fading or color change in excess of 5 Hunter delta-E units as determined by ASTM D2244-02.
 - b. Will not chalk in excess of numerical rating of 8 when measured in accordance with standard procedures specified in ASTM D4214-98 method D659.
 - c. Will not peel, crack, chip, or delaminate.
 2. Metal substrate will not rupture, fail structurally, or perforate.
- B. Furnish installer's 2-year warranty providing coverage against water leakage through roofing system.
1. Make repairs to roofing system required due to defects in materials or workmanship resulting in water leakage into or through roofing system.
 2. Include cost of labor and materials necessary to make required repairs.
 3. Not limited to specific dollar amount.
 4. Transferable to subsequent building owners during warranty period.

PART 2 PRODUCTS

2.1 ROOFING MANUFACTURERS

- A. Acceptable Roofing Manufacturers:
 - 1. Taylor Metal Products www.taylormetal.com
 - 2. AEP-Span. (www.aepspan.com).
- B. Substitutions: Under provisions of Division 01.

2.2 COMPONENTS

- A. Basis of Roof Panel Design: "Taylor Versa-Span".
 - 1. Configuration: Roof panels shall consist of mechanically seamed 1-3/4" inch high ribs spaced 12 inches on center with intermediate stiffening striations.

2.4 MATERIALS

- A. Pre-coated Galvanized Steel Sheet:
 - 1. ASTM A792, Structural Quality, G90 galvanized coating class, **24-gauge** core steel unless noted otherwise.
 - 2. Exterior Finish: DuraTech® 5000 (Polyvinylidene Fluoride), full 70% Kynar® 500/Hylar 5000® consisting of a baked-on 0.15-0.20 mil corrosion resistant primer and a baked-on 0.70-0.80 mil finish coat with a specular gloss of 10-30% when tested in accordance with ASTM D-523 at 60°. Color to be selected from full range of colors.
 - 3. Interior Finish: Primer Coat Material: Corrosion-resistant primer; primer coat dry film thickness: 0.15 mils; finish coat material: polyester paint, finish coat dry film thickness: 0.35 mils. Color: Off-White to Light Gray.
 - 4. **Color: Taylor Metals "Colonial Red" SRI-37.**

2.5 ACCESSORIES

- A. Fasteners:
 - 1. Panels and trim: per manufacturer's recommendation, finish to match panels.
 - 2. Underlayment: Hot-dip galvanized steel nails, length to penetrate minimum ¾ inch into sheathing.
- B. Panel Clips: Hot-dip galvanized steel, designed to fit between two adjacent panels and secure both panels.
- C. Sealant for Field Application: High grade non-curing butyl or curing urethane sealant as recommended by the panel manufacturer. Do not use sealant containing asphalt. See Section 079200 Joint Sealants.

2.6 FABRICATION

- A. Fabrication, General:
 - 1. Unless otherwise shown on Drawings or specified herein, fabricate panels in continuous lengths and fabricate flashings and accessories in longest practical lengths.
 - 2. Panels shall be factory correctively-leveled.
- B. Panels:
 - 1. Provide panels in full length from ridge to eave when possible.

2. Where single length panels are not practical, provide mated swaged panels for positive joint end laps, shingled to accommodate water run-off (fabricated with overlap in direction of water flow).
 3. Roof panels shall have flush horizontal and vertical surfaces to facilitate sealing at terminations. Panel configurations which create voids and requiring supplemental closure devices shall not be considered acceptable.
 4. Engineer panels to use concealed anchors that permit expansion and contraction, except at eaves, end laps, ridges, valleys, hips and gables.
- C. Seams:
1. Panel seams shall interlock entire length of seam.
 2. Design standing seam to lock up and resist joint disengagement during design wind uplift conditions as calculated according to local building codes.
 3. Provide pre-installed sealant within confines of panel's female leg to aid in resistance of leaks and provide panel-to-panel seal while allowing expansion and contraction movement.
 4. Seams shall be continuously locked together during installation.

PART 3 EXECUTION

3.1 INSTALLATION OF ROOFING

- A. Conform to SMACNA Manual, install in accordance with manufacturer's instructions and approved Shop Drawings.
- B. Apply roofing panels beginning at low edge of roof.
- C. Extend edge strip up under panels 4 inches minimum and secure at maximum 4 inches on center, located 1 inch down from upper edge of strips. Hook lower end of panels over edge strip.
- D. At end joints between panels, hook fold on lower end of upper panel into fold on upper end of underlying panel.
- E. Stagger end joints of adjacent panels.
- F. Form valleys of sheets not over 10 feet in length. Lap joints 12 inches minimum in direction of drainage. Extend minimum 12 inches under roofing panels on each side. Double fold valley and roofing sheets and cleat at 18 inches on center maximum.
- G. Fit flashings with square corners and surfaces true, aligned, and accurate to required profiles.
- H. Install joint sealers and gaskets to prevent water penetration.
- I. Flash penetrations through roofing with metal trim to match panels:
 1. Lap flashings over roof panels 12 inches minimum on all sides and seal with double bead of joint sealer.
 2. Install metal draw band and joint sealer at top of pipe penetrations.
 3. Install water diverter at uphill side of square and rectangular penetrations.
- J. Installation Tolerances:
 1. Variation from location: Plus or minus 1/4 inch.
 2. Variation from plane: 1/4 inch in 20 feet.

END OF SECTION

SECTION 076200
SHEET METAL FLASHINGS AND TRIM

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Downspouts
 - 2. Metal Flashings and Trim
- B. Related Sections:
 - 1. Division 01: Administrative, procedural, and temporary work requirements
 - 2. Section 07 54 19 – PVC Membrane Roofing
 - 3. Section 07 61 00 – Sheet Metal Roofing
 - 4. Section 07 92 00 – Joint Sealers

1.2 REFERENCES

- A. American Architectural Manufacturers Association (AAMA):
 - 1. 611 - Voluntary Specification for Anodized Architectural Aluminum.
 - 2. 621 - Voluntary Specifications for High Performance Organic Coatings on Coil Coated Architectural Hot Dipped Galvanized (HDG) and Zinc-Aluminum Coated Steel Substrates.
 - 3. 2604 - Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Architectural Extrusions and Panels.
 - 4. 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Architectural Extrusions and Panels.
- B. American National Standards Institute/Single Ply Roofing Institute (ANSI/SPRI) ES-1 - Wind Design Standard for Edge Systems Used with Low Slope Roofing Systems.
- C. ASTM International (ASTM):
 - 1. A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy Coated (Galvannealed) by the Hot-Dip Process.
 - 2. A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless-Steel Sheet, Strip, Plate, and Flat Bar.
 - 3. A755/A755M - Standard Specification for Steel Sheet, Metallic Coated by the Hot-Dip Process and Prepainted by the Coil-Coating Process for Exterior Exposed Building Products.
 - 4. A792/A792M - Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.
- D. Sheet Metal and Air Conditioning Manufacturer's Association International (SMACNA) - Architectural Sheet Metal Manual.

1.3 SUBMITTALS

- A. Submittals for Review:
 - 1. Shop Drawings: Show locations, types and thicknesses of metal, profiles, dimensions, fastening methods, provisions for expansion and contraction, and joint details.
 - 2. Samples:
 - a. Not required for this project.

1.4 QUALITY ASSURANCE

- A. Fabricator and Installer Qualifications: Minimum 5 years documented experience in work of this Section.
- B. Design, fabricate, and install sheet metal components in accordance with ANSI/SPRI ES-1.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Pre-coated Galvanized Steel Sheet:
 - 1. ASTM A755/A755M, Structural Quality, G90 galvanized coating class, 24 gage core steel unless noted otherwise.
- B. Exterior Finish (where adjacent to standing seam metal roofing or siding): DuraTech® 5000 (Polyvinylidene Fluoride), full 70% Kynar® 500/Hylar 5000® consisting of a baked-on 0.15-0.20 mil corrosion resistant primer and a baked-on 0.70-0.80 mil finish coat with a specular gloss of 10-30% when tested in accordance with ASTM D-523 at 60°.
- C. New downspouts to match sheet metal roofing color.

2.2 ACCESSORIES

- A. Fasteners: Same material and finish as sheet metal, with neoprene gasketed washers where exposed.
- B. Joint Sealers: Specified in Section 07 92 00.

2.3 FABRICATION

- A. Fabricate components in accordance with SMACNA Manual.
- B. Match existing design and details with replacement shapes.
- C. Fabricate corners in single units with minimum 18-inch-long legs.
- D. Fabricate vertical faces with bottom edge formed outward 3/8 inch and hemmed to form drip.
- E. Form sections accurate to size and shape, square and free from distortion and defects.
- F. Provide for thermal expansion and contraction in sheet metal:
 - 1. Sheet metal:
 - a. Provide expansion joints in sheet metal exceeding 10 feet in running length.
 - b. Place expansion joints at 10 feet on center maximum and maximum 2 feet from corners and intersections.
 - 2. Joint width: Consistent with types and sizes of materials, minimum width 1/4 inch.
- G. Fabricate expansion joints in edge flashings with backing and cover plates formed to flashing profile, minimum 8 inches long.
- H. Unless otherwise indicated, provide minimum 3/4-inch-wide flat lock seams; lap in direction of water flow.
- I. Fabricate cleats and starter strips of same material as sheet metal.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install flashing and sheet metal as indicated and in accordance with SMACNA Manual.

- B. Install cleats and starter strips before starting installation of sheet metal. Fasten at 6 inches on center maximum.
- C. Expansion Joints in Edge Flashings:
 - 1. Center backing plate between flashing pieces at end joints.
 - 2. Apply two continuous beads of joint sealer between backing plate and flashing sections at each end.
 - 3. Install flashing pieces with 1/2-inch expansion space at abutting ends; apply sealer to expansion space.
 - 4. Apply two continuous beads of joint sealer between cover plate and flashing sections at each end.
- D. Secure flashings with concealed fasteners where possible.
- E. Fit flashings tight, with square corners and surfaces true and straight.
- F. Seam and seal field joints.
- G. Separate dissimilar metals with bituminous coating or non-absorptive gaskets.
- H. Reglets:
 - 1. Install reglets true to line and level. Seal top of surface mounted reglet with joint sealer.
 - 2. Install flashings into reglets to form tight fit.
 - 3. Secure with plastic wedges at 9 inches on center maximum.
 - 4. Seal remaining space with joint sealer.
- J. Apply joint sealers as specified in Section 079200.

3.2 CLEANING

- A. Clean sheet metal; remove stains, spots, and minor abrasions without etching surfaces.

END OF SECTION

SECTION 079200 JOINT SEALERS

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Joint backup materials.
 - 2. Joint sealers.
- B. Related Sections:
 - 1. Division 01: Administrative, procedural, and temporary work requirements.
 - 2. Section 075419 - PVC Membrane Roofing
 - 3. Section 076100 – Sheet Metal Roofing
 - 4. Section 076200 – Sheet Metal Flashing and Trim
 - 5. Section 081300 – Doors & Frames
 - 6. Section 088000 – Glazing
 - 7. Section 091000 - Painting

1.2 REFERENCES

- A. ASTM International (ASTM):
 - 1. C510 - Standard Test Method for Staining and Color Change of Single- or Multicomponent Joint Sealants.
 - 2. C719 - Standard Test Method for Adhesion and Cohesion of Elastomeric Joint Sealants Under Cyclic Movement (Hockman Cycle).
 - 3. C794 - Standard Test Method for Adhesion-In-Peel of Elastomeric Joint Sealants.
 - 4. C834 - Standard Specification for Latex Sealing Compounds.
 - 5. C919 - Standard Practice for Use of Sealants in Acoustical Applications.
 - 6. C920 - Standard Specification for Elastomeric Joint Sealants.
 - 7. C1193 - Standard Guide for Use of Joint Sealants.
 - 8. C1248 - Standard Test Method for Staining of Porous Substrate by Joint Sealants.
 - 9. C1330 - Standard Specification for Cylindrical Sealant Backing for Use with Cold Liquid Applied Sealants.
 - 10. C1472 - Standard Guide for Calculating Movement and Other Effects When Establishing Sealant Joint Width.
 - 11. C1521 - Standard Practice for Evaluating Adhesion of Installed Weatherproofing Sealant Joints.
 - 12. D2203 - Standard Test Method for Staining from Sealants.
 - 13. D6690 - Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements.

1.3 SUBMITTALS

- A. Submittals for Review:
 - 1. Product Data: Indicate sealers, primers, backup materials, bond breakers, and accessories proposed for use.
 - 2. Warranty: Sample warranty form.

1.4 QUALITY ASSURANCE

- A. Applicator Qualifications: Minimum 5 years documented experience in work of this Section.
- B. Maximum Volatile Organic Compound (VOC) Content; interior sealers and accessories:
 - 1. Sealers: 250 grams per liter.
 - 2. Primers for non-porous substrates: 250 grams per liter.
 - 3. Primers for porous substrates: 775 grams per liter.
- C. Laboratory Pre-Construction Testing:
 - 1. Obtain representative samples of actual substrate materials.
 - 2. Test sealers and accessories for following:
 - a) Adhesion: Test to ASTM C794 and ASTM C719; determine surface preparation and required primer.
 - b) Compatibility: Test to ASTM C1087; determine that materials in contact with sealers do not adversely affect sealant materials or sealant color.
 - c) Staining: Test to ASTM D2203, ASTM C510, or ASTM C1248; determine that sealants will not stain joint substrates.
 - d) Pre-construction testing is not required when sealant manufacturer furnishes data acceptable to the Owner based on previous testing for materials matching those of this Project.

1.5 PROJECT CONDITIONS

- A. Do not apply sealers at temperatures below 40 degrees F unless approved by sealer manufacturer.

1.6 WARRANTIES

- A. Furnish manufacturer's 10-year warranty providing coverage for exterior sealers and accessories that fail to provide air and water tight seal, exhibit loss of adhesion or cohesion, or do not cure.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturers:
 - 1. BASF Building Systems. (www.buildingsystems.basf.com)
 - 2. Dow Corning Corp. (www.dowcorning.com)
 - 3. GE Silicones. (www.siliconeforbuilding.com)
 - 4. Pecora Corp. (www.pecora.com)
 - 5. Sika Corp. (www.sikausa.com)
 - 6. Tremco, Inc. (www.tremcosealants.com)
- B. Use sealants furnished/approved by the membrane manufacturer for all sealants in contact with the PVC membrane roofing.
- C. Substitutions: Under provisions of Division 01.

2.2 MATERIALS

- A. Joint Sealer Type 3:
 - 1. ASTM C920, Grade NS, single component polyurethane type, non-sag.
 - 2. Movement capability: Plus or minus 25 percent.
 - 3. Color: To be selected from manufacturer's full color range.

- B. Joint Sealer Type 4:
 - 1. ASTM C920, Grade NS, single component silicone type, non-staining, non-sag.
 - 2. Movement capability: Plus or minus 25 percent.
 - 3. Color: To be selected from manufacturer's full color range.
- C. Joint Sealer Type 5:
 - 1. ASTM C920, Grade NS, single component butyl rubber type, non-sag.
 - 2. Movement capability: Plus or minus 12-1/2 percent.
 - 3. Color: To be selected from manufacturer's full color range.

2.3 ACCESSORIES

- A. Primers, Bond breakers, and Solvents: As recommended by sealer manufacturer.
- B. Joint Backing:
 - 1. ASTM C1330, closed cell polyethylene foam, preformed round joint filler, non-absorbing, nonstaining, resilient, compatible with sealer and primer, recommended by sealer manufacturer for each sealer type.
 - 2. Size: Minimum 1.25 times joint width.

PART 3 EXECUTION

3.1 PREPARATION

- A. Remove loose and foreign matter that could impair adhesion. If surface has been subject to chemical contamination, contact sealer manufacturer for recommendation.
- B. Clean and prime joints in accordance with manufacturer's instructions.
- C. Protect adjacent surfaces with masking tape or protective coverings.
- D. Calculate joint dimensions in accordance with ASTM C1472.

3.2 APPLICATION

- A. Apply products in accordance with manufacturer's instructions.
- B. For sealants in contact with single ply membrane, use only product(s) listed by the membrane manufacturer.
- C. Install sealers and accessories in accordance with ASTM C1193.
- D. Install acoustical sealers and accessories in accordance with ASTM C919.
- E. Install joint backing to maintain required sealer dimensions. Compress backing approximately 25 percent without puncturing skin. Do not twist or stretch.
- F. Use bond breaker tape where joint backing is not installed.
- F. Fill joints full without air pockets, embedded materials, ridges, and sags.
- G. Tool sealer to smooth profile.
- H. Apply sealer within manufacturer's recommended temperature range.

3.3 CLEANING

- A. Remove masking tape and protective coverings after sealer has cured.
- B. Clean adjacent surfaces.

3.4 SCHEDULE

JOINT LOCATION OR TYPE

SEALER TYPE

Exterior Joints:

Joints in above-grade surfaces

3,4,5

END OF SECTION

081113 - HOLLOW METAL DOORS AND FRAMES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:

1. Standard and custom hollow metal doors and frames.
2. Steel sidelight, borrowed lite and transom frames.
3. Light frames and glazing installed in hollow metal doors.

- B. Related Sections:

1. Division 01: Administrative, procedural, and temporary work requirements.
2. Section 024119 Selective Demolition.
3. Section 079200 Joint Sealers.
4. Section 087100 Door Hardware.
5. Section 088000 Glazing.
6. Section 099100 Painting.

- C. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.

1. ANSI/SDI A250.8 - Specifications for Standard Steel Doors and Frames.
2. ANSI/SDI A250.4 - Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors, Frames, Frames Anchors and Hardware Reinforcing.
3. ANSI/SDI A250.6 - Recommended Practice for Hardware Reinforcing on Standard Steel Doors and Frames.
4. ANSI/SDI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames.
5. ANSI/SDI A250.11 - Recommended Erection Instructions for Steel Frames.
6. ASTM A1008 - Standard Specification for Steel Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability.
7. ASTM A653 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
8. ASTM A924 - Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process.
9. ASTM C 1363 - Standard Test Method for Thermal Performance of Building Assemblies by Means of a Hot Box Apparatus.

10. ASTM E283 - Standard Test Method for Determining Rate of Air Leakage Through Exterior Doors Under Specified Pressure Differences Across the Specimens.
11. ASTM E330 - Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
12. ASTM E 413 - Classification for Rating Sound Insulation.
13. ANSI/ASA S12.60 – Acoustical Performance Criteria, Design Requirements, and Guidelines for Schools
14. ASTM E1332 - Standard Classification for Determination of Outdoor-Indoor Transmission Class.
15. ANSI/BHMA A156.115 - Hardware Preparation in Steel Doors and Frames.
16. ANSI/SDI 122 - Installation and Troubleshooting Guide for Standard Steel Doors and Frames.
17. ANSI/NFPA 80 - Standard for Fire Doors and Fire Windows; National Fire Protection Association.
18. ANSI/NFPA 105: Standard for the Installation of Smoke Door Assemblies.
19. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies; National Fire Protection Association.
20. NFRC 102 – Procedure for Measuring the Steady State Thermal Transmittance of Fenestration Systems.
21. NFRC 400 – Procedure for Determining Fenestration Product Air Leakage.
22. UL 10C - Positive Pressure Fire Tests of Door Assemblies.
23. UL 1784 - Standard for Air Leakage Tests of Door Assemblies.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated. Include installation instructions, construction details, material descriptions, core descriptions, hardware reinforcements, profiles, anchors, fire-resistance rating, and finishes.
- B. Door hardware supplier shall furnish templates, template reference number and/or physical hardware to the steel door and frame supplier in order to prepare the doors and frames to receive the finish hardware items.
- C. Shop Drawings: Shall include the following:
 1. Elevations of each door design.
 2. Details of doors, including vertical and horizontal edge details and metal thicknesses.
 3. Frame details for each frame type, including dimensioned profiles and metal thicknesses.
 4. Locations of reinforcement and preparations for hardware.
 5. Details of anchorages, joints, field splices, and connections.
 6. Details of accessories.
 7. Details of moldings, removable stops, and glazing.
 8. Details of conduit and preparations for power, signal, and control systems.
- D. Samples for Verification:
 1. Samples not required for this project.

1.4 QUALITY ASSURANCE

- A. **Manufacturer Qualifications:** Provide hollow metal doors and frames from an SDI Certified manufacturer. www.steeldoor.org/sdicertified.php
- B. **Source Limitations:** Obtain hollow metal doors and frames through one source from a single manufacturer wherever possible.
- C. **Quality Standard:** In addition to requirements specified, furnish SDI-Certified manufacturer products that comply with ANSI/SDI A250.8, latest edition, "Recommended Specifications for Standard Steel Doors and Frames".
- D. **Fire-Rated Door Assemblies:** Assemblies complying with NFPA 80 that are listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing according to UL10C or NFPA 252 at positive pressure (neutral pressure at 40" above sill).
 - 1. **Oversize Fire-Rated Door Assemblies Construction:** For units exceeding sizes of tested assemblies, attach construction labels certifying doors are built to standard construction requirements for tested and labeled fire rated door assemblies except for size.
 - 2. **Temperature-Rise Limit:** Where indicated, provide doors that have a maximum transmitted temperature end point of not more than 450 deg F (250 deg C) above ambient after 30 minutes of standard fire-test exposure.
 - 3. **Smoke Control Door Assemblies:** Comply with UL 1784 and NFPA 105.
 - a. **Smoke "S" Label:** Doors to bear "S" label and include smoke and draft control gasketing applied to frame and on meeting stiles of pair doors.
- E. **Fire-Rated, Borrowed-Light Frame Assemblies:** Assemblies complying with NFPA 80 that are listed and labeled, by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire-protection ratings indicated, based on testing according to NFPA 257. Provide labeled glazing material.
- F. **Energy Efficient Exterior Openings:** Comply with minimum thermal ratings, based on ASTM C1363. Openings to be fabricated and tested as fully operable, thermal insulating door and frame assemblies.
 - 1. **Thermal Performance (Exterior Openings):** Independent testing laboratory certification for exterior door assemblies being tested in accordance with ASTM C1363 and meet or exceed the following requirements:
 - a. **Door Assembly Operable U-Factor and R-Value Ratings:** U-Factor 0.395, R-Value 2.53, including insulated door, thermal-break frame and threshold.
 - 2. **Air Infiltration (Exterior Openings):** Independent testing laboratory certification for exterior door assemblies being tested in accordance with ASTM E283 to meet or exceed the following requirements:
 - a. **Rate of leakage of the door assembly shall not exceed 0.25 cfm per square foot of static differential air pressure of 1.567 psf (equivalent to 25 mph wind velocity).**

- G. Pre-Submittal Conference: Conduct conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier, Installer, and Contractor to review proper methods and procedures for installing hollow metal doors and frames and to verify installation of electrical knockout boxes and conduit at frames with electrified or access control hardware.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver hollow metal work palletized, wrapped, or crated to provide protection during transit and Project site storage. Do not use non-vented plastic.
- B. Deliver welded frames with two removable spreader bars across bottom of frames, tack welded to jambs and mullions.
- C. Store hollow metal work under cover at Project site. Place in stacks of five units maximum in a vertical position with heads up, spaced by blocking, on minimum 4-inch high wood blocking. Do not store in a manner that traps excess humidity.
 - 1. Provide minimum 1/4-inch space between each stacked door to permit air circulation. Door and frames to be stacked in a vertical upright position.

1.6 PROJECT CONDITIONS

- A. Field Measurements: Verify actual dimensions of openings by field measurements before fabrication.

1.7 COORDINATION

- A. Coordinate installation of anchorages for hollow metal frames. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors. Deliver such items to Project site in time for installation.

1.8 WARRANTY

- A. Per Section 017000

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturers: Products shall be manufactured by a member of the Steel Door Institute. Steel Door Institute Members are as follows:
 - 1. Ceco Door.
 - 2. Curries
 - 3. Mesker Door, Inc.
 - 4. Pioneer Industries, Inc.

5. Premier Steel Doors and Frames.
6. Republic Doors & Frames.
7. Steelcraft.

B. Substitutions: Not permitted.

2.2 MATERIALS

- A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B; suitable for exposed applications.
- B. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B; with minimum G60 (Z180) or A60 (ZF180) metallic coating.
- C. Frame Anchors: ASTM A 653/A 653M, Commercial Steel (CS), Commercial Steel (CS), Type B; with minimum G60 (Z180) or A60 (ZF180) metallic coating.

2.3 HOLLOW METAL DOORS

- A. General: Provide 1-3/4 inch doors of design indicated, not less than thickness indicated; fabricated with smooth surfaces, without visible joints or seams on exposed faces unless otherwise indicated. Comply with ANSI/SDI A250.8.
- B. **Exterior Doors** (Energy Efficient): Face sheets fabricated of commercial quality hot-dipped zinc coated steel that complies with ASTM A924 A60. Provide doors complying with requirements indicated below by referencing ANSI/SDI A250.8 for level and model, and ANSI/SDI A250.4 for physical performance level.
 1. Design: Flush panel.
 2. Core Construction: Foamed in place polyurethane and steel reinforced core with no stiffener face welds.
 - a. Provide 18-gauge steel vertical reinforcements 6 inches apart and welded in place. Foamed in place polyurethane core is chemically bonded to all interior surfaces. No face welding is permitted.
 - b. Thermal properties to rate at a fully operable minimum U-Factor 0.374 and R-Value 2.53, including insulated door, Mercury thermal-break frame and threshold.
 3. Level/Model: Level 3 and Physical Performance Level A (Extra Heavy Duty), **Minimum 16 gauge** (0.053-inch - 1.3-mm) thick steel, Model 2.
 4. Vertical Edges: Vertical edges to be mechanically interlocked with hairline seam. Beveled Lock Edge, 1/8 inch in 2 inches (3 mm in 50 mm).
 5. Top and Bottom Edges: Reinforce tops and bottoms of doors with a continuous steel channel not less than 16 gauge, extending the full width of the door and welded to the face sheet. Doors with an inverted top channel to include a steel closure channel, screw attached, with the web of the channel flush with the face sheets of the door. Plastic or composite channel fillers are not acceptable.
 6. Hinge Reinforcement: Minimum 7 gauge (3/16") plate 1-1/4" x 9".

7. Hardware Reinforcements: Fabricate according to ANSI/SDI A250.6 with reinforcing plates from same material as door face sheets.

C. Manufacturers Basis of Design: **Steelcraft A-14 Entrance Doors**, full glass.

2.4 HOLLOW METAL FRAMES

- A. General: Comply with ANSI/SDI A250.8 and with details indicated for type and profile.
- B. Thermal Break Frames: Subject to the same compliance standards and requirements as standard hollow metal frames. Tested for thermal performance in accordance with NFRC 102, and resistance to air infiltration in accordance with NFRC 400. Where indicated provide thermally broken frame profiles available for use in both masonry and drywall construction. Fabricate with 1/16" positive thermal break and integral weatherstripping.
- C. Exterior Frames: Fabricated of hot-dipped zinc coated steel that complies with ASTM A 653/A 653M, Coating Designation A60.
 1. Fabricate frames with mitered or coped corners. Profile as indicated on drawings.
 2. Frames: Minimum 14 gauge (0.067-inch -1.7-mm) thick steel sheet.
 3. Manufacturers Basis of Design:
- D. Hardware Reinforcement: Fabricate according to ANSI/SDI A250.6 Table 4 with reinforcement plates from same material as frames.

2.5 FRAME ANCHORS

- A. Jamb Anchors:
 1. Masonry Type: Adjustable T-shaped "pipe & strap" type anchors to suit frame size, formed from A60 metallic coated material.

2.6 LIGHT OPENINGS AND GLAZING

- A. Stops and Moldings: Provide stops and moldings around glazed lights where indicated. Form corners of stops and moldings with butted or mitered hairline joints at fabricator's shop. Fixed and removable stops to allow multiple glazed lights each to be removed independently. Coordinate frame rabbet widths between fixed and removable stops with the type of glazing and installation indicated.
- B. Moldings for Glazed Lights in Doors and Loose Stops for Glazed Lights in Frames: Minimum 20 gauge thick, fabricated from same material as door face sheet in which they are installed.
- C. Fixed Frame Moldings: Formed integral with hollow metal frames, a minimum of 5/8 inch (16 mm) high unless otherwise indicated. Provide fixed frame moldings and stops on outside of exterior and on secure side of interior doors and frames.

- D. Preformed Metal Frames for Light Openings: Manufacturer's standard frame formed of 0.048-inch-thick, cold rolled steel sheet; with baked enamel or powder coated finish; and approved for use in doors of fire protection rating indicated. Match pre-finished door paint color where applicable.
- E. Glazing: Comply with requirements in Division 08 Section "Glazing" and with the hollow metal door manufacturer's written instructions.
 - 1. Factory Glazing: Factory install glazing in doors as indicated. Doors with factory installed glass to include all of the required glazing material.

2.7 ACCESSORIES

- A. Mullions and Transom Bars: Join to adjacent members by welding or rigid mechanical anchors.

2.8 FABRICATION

- A. Fabricate hollow metal work to be rigid and free of defects, warp, or buckle. Accurately form metal to required sizes and profiles, with minimum radius for thickness of metal. Where practical, fit and assemble units in manufacturer's plant. When shipping limitations so dictate, frames for large openings are to be fabricated in sections for splicing or splining in the field by others.
- B. Tolerances: Fabricate hollow metal work to tolerances indicated in ANSI/SDI A250.8.
- C. Hollow Metal Doors:
 - 1. Exterior Doors: Provide optional weep-hole openings in bottom of exterior doors to permit moisture to escape where specified.
 - 2. Glazed Lights: Factory cut openings in doors with applied trim or kits to fit. Factory install glazing where indicated.
 - 3. Louvers: Factory cut openings in door and install louvers into prepared openings where indicated.
 - 4. Astragals: Provide overlapping astragals as noted in door hardware sets in Division 08 Section "Door Hardware" on one leaf of pairs of doors where required by NFPA 80 for fire-performance rating or where indicated. Extend minimum 3/4 inch beyond edge of door on which astragal is mounted.
 - 5. Continuous Hinge Reinforcement: Provide welded continuous 12 gauge strap for continuous hinges specified in hardware sets in Division 08 Section "Door Hardware".
- D. Hollow Metal Frames:
 - 1. Shipping Limitations: Where frames are fabricated in sections due to shipping or handling limitations, provide alignment plates or angles at each joint, fabricated of same thickness metal as frames.
 - 2. Welded Frames: Weld flush face joints continuously; grind, fill, dress, and make smooth, flush, and invisible.

- a. Welded frames are to be provided with two steel spreaders temporarily attached to the bottom of both jambs to serve as a brace during shipping and handling. Spreader bars are for bracing only and are not to be used to size the frame opening.
 - 3. Sidelight and Transom Bar Frames: Provide closed tubular members with no visible face seams or joints, fabricated from same material as door frame. Fasten members at crossings and to jambs by butt welding.
 - 4. High Frequency Hinge Reinforcement: Provide high frequency hinge reinforcements at door openings 48-inches and wider with mortise butt type hinges at top hinge locations.
 - 5. Continuous Hinge Reinforcement: Provide welded continuous 12 gauge straps for continuous hinges specified in hardware sets in Division 08 Section "Door Hardware".
 - 6. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated for removable stops, provide security screws at exterior locations.
 - 7. Hospital (Terminated) Stops: Where indicated on the drawings, provide frame stops that terminate six inches above the bottom of each jamb. Close the bottom of the stop at a 45 degree angle.
 - 8. Mortar Guards: Provide guard boxes at back of hardware mortises in frames at all hinges and strike preps regardless of grouting requirements.
 - 9. Jamb Anchors: Provide number and spacing of anchors as follows:
 - a. Masonry Type: Locate anchors not more than 18 inches from top and bottom of frame. Space anchors not more than 32 inches o.c. and as follows:
 - 1) Two anchors per jamb up to 60 inches high.
 - 2) Three anchors per jamb from 60 to 90 inches high.
 - 3) Four anchors per jamb from 90 to 120 inches high.
 - 4) Four anchors per jamb plus 1 additional anchor per jamb for each 24 inches or fraction thereof above 120 inches high.
 - 10. Frame Undercoating: Where frames are fully grouted with an approved Portland Cement based grout or mortar, coat inside of frame throat with a water-based frame undercoating or asphaltic emulsion coating to a minimum thickness of 3 mils DFT, tested in accordance with UL 10C and applied to the frame under a 3rd party independent follow-up service procedure.
- E. Hardware Preparation: Factory prepare hollow metal work to receive template mortised hardware; include cutouts, reinforcement, mortising, drilling, and tapping according to the Door Hardware Schedule and templates furnished as specified in Division 08 Section "Door Hardware."
- 1. Locate hardware as indicated, or if not indicated, according to ANSI/SDI A250.8.
 - 2. Reinforce doors and frames to receive non-template, mortised and surface mounted door hardware.
 - 3. Comply with applicable requirements in ANSI/SDI A250 specifications for preparation of hollow metal work for hardware.
 - 4. Coordinate locations of conduit and wiring boxes for access control devices.

2.9 STEEL FINISHES

- A. Prime Finishes: Doors and frames to be cleaned, and chemically treated to insure maximum finish paint adhesion. Surfaces of the door and frame exposed to view to receive a factory applied coat of rust inhibiting shop primer.
 - 1. Shop Primer: Manufacturer's standard, fast-curing, lead and chromate free primer complying with ANSI/SDI A250.10 acceptance criteria; recommended by primer manufacturer for substrate; and compatible with substrate and field-applied coatings.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. General Contractor to verify the accuracy of dimensions given to the steel door and frame manufacturer for existing openings or existing frames (strike height, hinge spacing, hinge back set, etc.).
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Remove welded in shipping spreaders installed at factory. Restore exposed finish by grinding, filling, and dressing, as required to make repaired area smooth, flush, and invisible on exposed faces.
- B. Prior to installation, adjust and securely brace welded hollow metal frames for square, level, twist, and plumb condition.
- C. Tolerances shall comply with SDI-117 "Manufacturing Tolerances Standard Steel Doors and Frames."
- D. Drill and tap doors and frames to receive non-template, mortised, and surface-mounted door hardware.

3.3 INSTALLATION

- A. General: Install hollow metal work plumb, rigid, properly aligned, and securely fastened in place; comply with Drawings and manufacturer's written instructions.
- B. Hollow Metal Frames: Install hollow metal frames of size and profile indicated. Comply with ANSI/SDI A250.11 and NFPA 80 at fire rated openings.

1. Set frames accurately in position, plumbed, leveled, aligned, and braced securely until permanent anchors are set. After wall construction is complete and frames properly set and secured, remove temporary braces, leaving surfaces smooth and undamaged. Shim as necessary to comply with installation tolerances.
 2. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor, and secure with post-installed expansion anchors.
 3. Masonry Walls: Coordinate installation of frames to allow for solidly filling space between frames and masonry with mortar.
 4. Grout Requirements: Grout shall be mixed to provide a 4 inch (102 mm) maximum slump consistency, hand troweled into place. Grout mixed to a thin "pumpable" consistency shall not be used.
- C. Hollow Metal Doors: Fit hollow metal doors accurately in frames, within clearances specified below. Shim as necessary.
1. Non-Fire-Rated Standard Steel Doors:
 - a. Jamb and Head: 1/8 inch plus or minus 1/16 inch.
 - b. Between Edges of Pairs of Doors: 1/8 inch plus or minus 1/16 inch.
 - c. Between Bottom of Door and Top of Threshold: Maximum 3/8 inch.
 - d. Between Bottom of Door and Top of Finish Floor (No Threshold): Maximum 3/4 inch.
- D. Field Glazing: Comply with installation requirements in Division 08 Section "Glazing" and with hollow metal manufacturer's written instructions.

3.4 ADJUSTING AND CLEANING

- A. Final Adjustments: Check and readjust operating hardware items immediately before final inspection. Leave work in complete and proper operating condition. Remove and replace defective work, including hollow metal work that is warped, bowed, or otherwise unacceptable.
- B. Remove grout and other bonding material from hollow metal work immediately after installation.
- C. Prime-Coat and Painted Finish Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat, or painted finishes, and apply touchup of compatible air drying, rust-inhibitive primer, zinc rich primer (exterior and galvanized openings) or finish paint.

END OF SECTION 081113

**SECTION 087100
DOOR HARDWARE**

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Hardware for interior and exterior doors.
 - 2. Hardware for other sections referencing this section.
- B. Related Sections:
 - 1. Division 01: Administrative, procedural, and temporary work requirements.
 - 2. Section 081300 Metal Doors & Frames
 - 3. Section 091000 Hardware

1.2 REFERENCES

- A. American National Standards Institute/Builders Hardware Manufacturers Association (ANSI/BHMA):
 - 1. A156.1 - Butts and Hinges.
 - 2. A156.2 - Bored and Preassembled Locks and Latches.
 - 3. A156.4 - Door Controls - Closers.
 - 4. A156.5 - Auxiliary Locks and Associated Products.
 - 5. A156.18 - Materials and Finishes.

1.3 SUBMITTALS

- A. Submittals for Review:
 - 1. Shop Drawings: Schedule hardware by door type and location; show door size, hand, thickness, edge bevel, hardware components and quantities, keying, and finishes.
 - 2. Product Data: Manufacturer's descriptive data for each component.
 - 3. Warranty: Sample warranty form.
- B. Closeout Submittals:
 - 1. Copy of approved hardware schedule.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Minimum 10 years documented experience in work of this Section.
- B. Conform to ICC A117.1-2009 Accessible and Usable Buildings and Facilities for locating hardware and for door opening force requirements.
- C. Pre-Installation Conference:
 - 1. Convene at site prior to ordering permanent cylinders for Project.
 - 2. Attendance: Architect, Owner, Contractor, and hardware supplier.
 - 3. Review, discuss, and finalize Owner's keying requirements.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Pack hardware items separately, with fasteners, installation instructions, and templates.
- B. Mark containers with item number corresponding to hardware schedule.

1.6 WARRANTIES

- A. Furnish manufacturer's standard warranty.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Butts: Stanley (www.stanleyhardware.com)
- B. Locks: Schlage. (<http://www.schlage.com>)
- C. Closers: LCN by Allegion. (www.allegion.com)
- D. Push – Pulls: Trimco. (www.trimcohardware.com)
- E. Exit Devices: Von Duprin (<http://www.vonduprin.com>)
- F. Flushbolts, Kickplates, Stops: Ives by Allegion. (www.allegion.com)
- G. Gaskets: Steelcraft by Allegion. (www.allegion.com)
- H. Thresholds: Pemko (<http://www.pemko.com>)
- I. Substitutions: Under provisions of Division 01.

2.2 MANUFACTURED UNITS

- A. Butt Hinges:
 - 1. Description: ANSI/BHMA A156.1, full mortise type, five knuckle, non-rising pin, hole in bottom tip for pin removal.
 - 2. Exterior outswinging doors: Non-removable pins.
 - 3. Weight: Heavy Duty.
 - 4. Bearing type: Ball bearing.
 - 5. Size: 4-1/2 x 4-1/2 inches.
- B. Locksets, Latchsets, Deadbolts, and Cylinders:
 - 1. Locksets and latchsets:
 - a. Type: A156.2, Grade 1, cylindrical, key-in-lever handles.
 - b. Lever design: Schlage "Rhodes" style.
 - 2. Deadbolts:
 - a. Type: ANSI/BHMA A156.5, cylindrical type with 1 inch bolt throw.
 - b. Functions: As scheduled.
 - 3. Strike plates: Curved lip, minimum lip projection necessary to protect door frame and trim and to conceal edges of strike cutout.
 - 4. Strike boxes: Steel.
 - 5. Cylinders: Six pin, solid brass, removable core type.
 - 6. Keyway: Schlage E to match existing building.
 - 7. Keys: Solid brass or nickel silver.
 - 8. Keying:
 - a. Furnish cylinders with 2 blank keys for each cylinder to SOU for final keying by SOU.
- C. Closers:
 - 1. Conform to ANSI A156.4, Grade 1.
 - 2. Closers shall conform to the following:

- a. The closer shall have minimum 50 percent adjustable closing force over minimum value for that closer and have adjustable hydraulic back check effective between 60 degrees and 85 degrees of door opening.
 - b. Where specified, closer shall have hold-open feature.
 - c. Size Requirements: Size closers in accordance with manufacturer's recommendations or provide multi-size closers, sizes 1 through 6 except where multi-size closer is not available for the required application.
 - d. Material of closer body shall be forged or cast iron.
 - e. Arm and brackets for closers shall be steel, malleable iron or high strength ductile cast iron.
 - f. Closers shall have full size metal cover; plastic covers will not be accepted.
 - g. Closers shall have adjustable hydraulic back-check, separate valves for closing and latching speed, adjustable back-check positioning valve, and adjustable delayed action valve.
 - h. Provide closers with any accessories required for the mounting application, including (but not limited to) drop plates, special soffit plates, spacers for heavy-duty parallel arm fifth screws, bull-nose or other regular arm brackets, longer or shorter arm assemblies, and special factory templating. Provide special arms, drop plates, and templating as needed to allow mounting at doors with overhead stops and/or holders. Provide shims/spacer plates at doors with vision lites as required to clear vision lite frame.
 - i. Closer arms or backcheck valve shall not be used to stop the door from overswing, except in applications where a separate wall, floor, or overhead stop cannot be used.
 - j. Provide parallel arm closers with heavy duty rigid arm.
 - k. Where closers are to be installed on the push side of the door, provide parallel arm type except where conditions require use of top jamb arm.
 - l. Provide all surface closers with the same body attachment screw pattern for ease of replacement and maintenance.
 - m. All closers shall have a 1 1/2" (38mm) minimum piston diameter.
- D. Door Stops: Provide a dome floor or wall stop for every opening as listed in the hardware sets.
- 1. Wall stop and floor stop shall be wrought bronze, brass or stainless steel.
 - 2. Provide fastener suitable for wall construction.
 - 3. Coordinate reinforcement of walls where wall stop is specified.
 - 4. Provide dome stops where wall stops are not practical. Provide spacers or carpet riser for floor conditions encountered.
- E. Door Bottoms: See Hardware Schedule.
- F. Push-Pull Plates: Aluminum, beveled edges, 3 1/2 x 15 inches, secured with through bolts. G. Door Pulls: 1" dia. profile, 8 inches center-to-center of mounting holes.
- H. Kick Plates:
- 1. Type: 16 gage, square edges, secured with flathead countersunk screws.
 - 2. Size: 10 inches high x door width less 2 inches.
- I. Silencers: Conform to ANSI A156.16. Provide door mutes or door silencers Type L03011, of white or light gray color, on each steel door frame, except frames for sound-resistant doors. Furnish 3 mutes for single doors and 6 mutes for each pair of doors.
- J. Sound Seals: All seals shall be finished to match adjacent frame color. Seals shall be furnished as listed in schedule. Material shall be UL listed for labeled openings.

2.3 FINISHES

- A. See Section 3.4 Schedule
- B. Finishes: To ANSI/BHMA A156.18.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install hardware in accordance with approved hardware schedule and manufacturer's instructions.
- B. Install mortise items flush with adjacent surfaces.
- C. Install locksets, closers, and trim after finish painting.
- D. Mount closers so that closers and closer arms are not visible on corridor or public side of doors or on exterior of building.
- E. Mounting Heights - Finished Floor to Center Line of:
 - 1. Locksets: 38 inches.
 - 2. Push and pull plates: 42 inches.
 - 3. Dead locks: 48 inches.
 - 4. Push pad exit devices: 42 inches.
 - 5. Cross bar exit devices: 38 inches.
 - 6. Top hinge: Maximum 10 inches from frame head.
 - 7. Bottom hinge: Maximum 12-1/2 inches from floor.
 - 8. Intermediate hinges: Equally spaced.

3.2 PROTECTION

- A. Remove or protect hardware until painting is completed.

3.3 ADJUSTING

- A. Test and adjust hardware for quiet, smooth operation, free from binding and rattling.
- B. Adjust doors to operate with maximum opening forces in accordance with applicable accessibility code.

3.4 SCHEDULE

FINISH HARDWARE FOR:

SOUTHERN OREGON UNIVERSITY ED-PSYCH ENVELOPE PROJECT

FINISH:

DULL CHROME US26D

MANUFACTURERS SPECIFIED =

BUTTS	STANLEY, BEST
LOCKS	SCHLAGE ("E" KEYWAY, RHODES)
THRESHOLDS	PEMKO
CLOSERS	LCN
EXIT DEVICES	VON DUPRIN
KICKPLATES	IVES
STOPS	IVES
PUSH-PULL	TRIMCO
GASKET	STEELCRAFT, PEMKO
ELECTRIC STRIKE	HES
REM. MULLION	VON DUPRIN

Hardware Set #1

DOORS: H001-1, H100-1, H202-1, 220-1 (Single Leaf Entry Doors)

3 EA	BUTTS 4.5 X 4.5 (Stainless, NRP)
1 EA	EXIT DEVICE (Von Duprin 99 NL)
1 EA	CYLINDER (exterior, Schlage E)
1 EA	CYLINDER (panic bar lockdown, Schlage E)
1 EA	ELECTRIC STRIKE (HES)
1 EA	CLOSER (LCN 4040XP)
1 EA	WEATHERSTRIP
1 EA	DOOR SWEEP
1 SET	THRESHOLD

Hardware Set #2

DOOR: H110-1, (Pair 3'-0" Entry Doors)

3 EA	BUTTS 4.5 X 4.5 (Stainless, NRP)
2 EA	EXIT DEVICE (Von Duprin 99 NL)
2 EA	CYLINDER (exterior, Schlage E)
2 EA	CYLINDER (panic bar lockdown, Schlage E)
1 EA	ELECTRIC STRIKE (HES)
2 EA	CLOSER (LCN 4040XP)
2 EA	WEATHERSTRIP
2 EA	DOOR SWEEP
1 SET	THRESHOLD (6 ft)
1 EA	REMOVABLE MULLION (Von Duprin 4954)

END OF SECTION

SECTION 088000 GLAZING

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Glass for other sections referencing this Section.
 - 2. Exterior insulated glazing.
 - 3. Glazing compounds and accessories.
- B. Related Sections:
 - 1. Division 01: Administrative, procedural, and temporary work requirements.
 - 2. Section 081300: Hollow Metal Doors and Frames

1.2 REFERENCES

- A. American Architectural Manufacturers Association (AAMA) 800 - Voluntary Specifications and Test Methods for Sealants.
- B. American National Standards Institute (ANSI) Z97.1 - Safety Performance Specifications and Methods of Test for Safety Glazing Material Used in Buildings.
- C. American Society of Civil Engineers (ASCE) 7 - Minimum Design Loads for Buildings and Other Structures.
- D. ASTM International (ASTM):
 - 1. C509 - Standard Specification for Elastomeric Cellular Preformed Gasket and Sealing Material.
 - 2. C794 - Standard Test Method for Adhesion-In-Peel of Elastomeric Joint Sealants.
 - 3. C864 - Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers.
 - 4. C920 - Standard Specification for Elastomeric Joint Sealants.
 - 5. C1036 - Standard Specification for Flat Glass.
 - 6. C1048 - Standard Specification for Heat-Treated Flat Glass-Kind HS, Kind FT, Coated and Uncoated Glass.
 - 7. C1115 - Standard Specification for Dense Elastomeric Silicone Rubber Gaskets and Accessories.
 - 8. C1172 - Standard Specification for Laminated Architectural Flat Glass.
 - 9. C1281 - Standard Specification for Preformed Tape Sealants for Glazing Applications.
 - 10. C1294 - Standard Test Method for Compatibility of Insulating Glass Edge Sealants with Liquid Applied Glazing Materials.
 - 11. C1330 - Standard Specification for Cylindrical Sealant Backing for Use with Cold Liquid Applied Sealants.
 - 12. E1300 - Standard Practice for Determining Load Resistance of Glass in Buildings.
 - 13. E2190 - Standard Specification for Insulating Glass Unit Performance and Evaluation.
- E. Consumer Product Safety Commission (CPSC) 16 CFR 1201 - Safety Standard for Architectural Glazing Materials.
- F. Glass Association of North America (GANA):
 - 1. Engineering Standards Manual.
 - 2. Glazing Manual.
 - 3. Laminated Glass Design Guide.
- G. National Fenestration Rating Council (NFRC):
 - 1. 100 - Procedure for Determining Fenestration Product Thermal Properties.
 - 2. 200 - Procedure for Determining Fenestration Product Solar Heat Gain Coefficients at Normal Incidence.

3. 300 - Procedures for Determining Solar Optical Properties of Simple Fenestration Products.
- H. Underwriters Laboratories (UL) 752 - Standard for Safety Bullet-Resisting Equipment.

1.3 SYSTEM DESCRIPTION A.

Glass Thicknesses:

1. Indicated thicknesses are minimums; select actual glass thicknesses by analyzing loads and conditions.
2. Size glass to withstand positive and negative wind pressure acting normal to plane in accordance with Building Code as measured in accordance with ASTM E330.
3. Provide glass in thicknesses and strengths to meet or exceed following criteria:
 - a. Comply with ASTM E1300.
 - b. Probability of breakage for vertical glazing: 8 lites per 1000 for lites set within 15 degrees of vertical and under wind load for load duration of 3 seconds.
 - c. Thickness of tinted glass: Provide same thickness for each tint color for all applications.

1.4 SUBMITTALS

A. Submittals for Review:

1. Product Data: Descriptive data and performance attributes for glass products.
2. Samples:
 - a. Not required for this project
3. Warranty: Sample warranty form.

B. Quality Control Submittals:

1. Test Report: Preconstruction adhesion and compatibility test report from glazing sealant manufacturer, based on submitted samples or acceptable data from previous testing of current formulations with similar products.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Minimum 5 years documented experience in work of this Section.

B. Regulatory Requirements:

1. Provide safety glass for locations subject to human impact as required by Building Code.
2. Safety glass: Tested and labeled to CPSC 16 CFR 1201.

C. Perform Work in accordance with GANA Glazing Manual for glazing installation methods.

D. Interior Glazing Sealers and Accessories: Maximum volatile organic compound (VOC) content as follows:

1. Structural glazing sealant: 100 grams per liter.
2. Glazing sealant: 250 grams per liter.
3. Primers for non-porous substrates: 250 grams per liter.
4. Primers for porous substrates: 775 grams per liter.

1.6 PROJECT CONDITIONS

- A. Perform glazing when ambient temperature is above 40 degrees F.
- B. Perform glazing on dry surfaces.

1.7 WARRANTIES

- A. Glass Coatings: Provide manufacturer's 10-year warranty against peeling, cracking, or deterioration of coating under normal conditions.
- B. Laminated Glass Units: Provide manufacturer's 5-year warranty against manufacturing defects resulting in edge separation, delamination, or material obstruction of vision through glass surface.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturers - Glass:
 - 1. PPG Industries, Inc. (<http://www.ppg.com/>)
 - 2. Oldcastle Building Envelope. (www.oldcastlebe.com)
- B. Substitutions: Under provisions of Division 01.

2.2 GLAZING UNITS

- A. Type A - Sealed Insulating Glass Units: Vision glazing.
 - 1. Locations: All Exterior Glazing
 - 2. Application(s): All exterior glazing unless otherwise indicated.
 - 3. Outboard Lite: Annealed float glass, 1/4 inch thick, minimum.
 - a. Tint: Clear.
 - b. Coating: Low-E type, PPG Solarban 70XL on #2 surface
 - 4. Inboard Lite: Fully tempered float glass, 1/4 inch thick, minimum.
 - a. Tint: Clear.
 - 5. Total Thickness: 1 inch.
 - 6. Total Visible Light Transmittance: 64 percent, nominal.
 - 7. Total Solar Heat Gain Coefficient: 0.27 percent, nominal.
 - 8. Glazing Method: Gasket glazing.

2.3 MATERIALS - GLASS

- A. Clear Glass: ASTM C1036, Type 1 transparent flat, Class 1 clear, Quality q3 glazing select.
- B. Clear Tempered Glass: ASTM C1048, Type 1 transparent flat, Class 1 clear, Quality q3 glazing select with horizontal tempering.
- C. Laminated Glass: Float glass laminated in accordance with ASTM C1172.
 - 1. Laminated Safety Glass: Comply with 16 CFR 1201 test requirements for Category II.
 - 2. Plastic Interlayer: 0.030 inch thick, minimum.
 - a. Interlayer: Polyvinyl butyral of thickness indicated with a proven record of no tendency to bubble, discolor, or lose physical and mechanical properties after laminating glass lites and installation.
 - 1) For polyvinyl butyral interlayers, laminate lites in autoclave with heat plus pressure.
 - b. Laminating Process: Fabricate laminated glass to produce glass free of foreign substances and air or glass pockets.
 - 3. Where fully tempered is specified or required, provide glass that has been tempered by the tong-less horizontal method.

2.4 SEALED INSULATING GLASS UNITS

- A. Sealed Insulating Glass Units: Types as indicated.
 - 1. Durability: Certified by an independent testing agency to comply with ASTM E2190.
 - 2. Edge Spacers: Aluminum, bent and soldered corners.
 - 3. Edge Seal: Glass to elastomer with supplementary silicone sealant.
 - 4. Edge Seal Color: Black.
 - 5. Purge interpane space with dry hermetic air.

2.5 ACCESSORIES

- A. Setting Blocks: ASTM C864, neoprene or EPDM, or ASTM C1115, silicone; 80 to 90 Shore A durometer hardness.
- B. Spacers: ASTM C864, neoprene or EPDM, or ASTM C1115, silicone; 50 to 60 Shore A durometer hardness.
- C. Glazing Gaskets:
 - 1. Dense compression gaskets: ASTM C864, neoprene or EPDM, or ASTM C1115, silicone or thermoplastic polyolefin rubber, molded or extruded shape to fit glazing channel retaining slot; black color.
 - 2. Soft compression gaskets: ASTM C509, Type II, black, molded or extruded, neoprene, EPDM, silicone or thermoplastic polyolefin rubber, of profile and hardness required to maintain watertight seal; black color.
- D. Butt Joint Glazing Sealant: ASTM C920, Type S, Grade NS, Class 25; single component silicone, low modulus type, non-sag, clear color.
- E. Glazing Sealant: ASTM C920, Type S, Grade NS, Class 25; single component silicone, low modulus, non-sag, clear color.
- F. Sealant Backing: ASTM C1330, Type O, size and density to control glazing sealant depth and produce optimum glazing sealant performance.
- G. Primer: As recommended by glazing sealant manufacturer.
- H. Glazing Tape: ASTM C1281 and AAMA 800; butyl based elastomeric tape with integral resilient tube spacer, 10 to 15 Shore A durometer hardness, black color, coiled on release paper; widths required for installation.

2.6 FABRICATION

- A. Annealed Glass: Comply with ASTM C1036.
- B. Tempered Glass:
 - 1. Comply with ASTM C1048.
 - 2. Process in horizontal position so that inherent roller distortion will run parallel to building floor lines after installation.
- C. Fabrication Tolerances: ASTM C1036 and ASTM C1048.
- D. Glass Identification:
 - 1. Apply manufacturer's label indicating type and thickness to each light of glass. Show position of exterior face when installed, where applicable.
 - 2. Etch manufacturer's label on each light of tempered glass.
- E. Source Quality Control:
 - 1. Preconstruction adhesion and compatibility testing:
 - Perform adhesion test including ultraviolet exposure through glass on production samples of metals and glass in accordance with ASTM C794.
 - a. Test glass units, glazing materials, and glass framing members with specified finish for sealant compatibility, priming, and preparation requirements for optimum adhesion and performance.

PART 3 EXECUTION

3.1 PREPARATION

- A. Clean glazing rabbets; remove loose and foreign matter.
- B. Remove protective coatings on metal surfaces.
- C. Clean glass just prior to installation.

3.2 INSTALLATION - GENERAL

- A. Install glass in accordance with manufacturer's instructions.
- B. Maintain manufacturer's recommended edge and face clearances between glass and frame members.

3.3 INSTALLATION - GASKET GLAZING METHOD

- A. Fabricate gaskets to fit openings; allow for stretching of gaskets during installation.
- B. Set soft compression gasket against fixed stop or frame with bonded miter cut joints at corners.
- C. Set glass centered in openings on setting blocks.
- D. Install removable stops and insert dense compression gaskets at corners, working toward centers of glass, compressing glass against soft compression gaskets to produce weathertight seal.
- E. Seal joints in gaskets.
- F. Allow gaskets to protrude past face of glazing stops.

3.4 INSTALLATION - TAPE GLAZING METHOD

- A. Apply tape to permanent stops, projecting slightly above sight line.
- B. Press glass into contact with tape.
- C. Place glazing tape on removable stop side of glass.
- D. Install removable stop and apply pressure to ensure contact.
- E. Trim protruding tape edges.

3.5 PROTECTION

- A. After installation, mark glass with an 'X' using removable plastic tape.

END OF SECTION

SECTION 099100

PAINTING

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Surface preparation and field application of paints.
- B. Related Sections:
 - 1. Division 01: Administrative, procedural, and temporary work requirements.
 - 2. Section 055000: Metal Fabrications
 - 3. Section 081300: Hollow Metal Doors & Frames

1.2 REFERENCES

- A. ASTM International (ASTM):
 - 1. D4442 - Standard Test Method for Direct Moisture Content Measurement of Wood and WoodBase Materials.
 - 2. D6886 - Standard Test Method for Speciation of the Volatile Organic Compounds (VOCs) in Low VOC Content Waterborne Air-Dry Coatings by Gas Chromatography.
 - 3. ASTM E119, "Standard Test Methods for Fire Tests of Building Construction and Materials"
 - 4. ASTM E84, "Standard Test Method for Surface Burning Characteristics of Building Materials"
 - 5. ASTM D2240, "Standard Test Method for Rubber Property—Durometer Hardness"
 - 6. ASTM D2794, "Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact)"
 - 7. ASTM D4060, "Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser"
 - 8. ASTM D4541, "Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers"
 - 9. ASTM E329-09, "Standard Specification for Agencies Engaged in Construction Inspection and Testing"
- B. Green Seal, Inc. (GS) 11 - Standard for Paints and Coatings.
- C. Master Painters Institute (MPI)- Architectural Painting Specification Manual.
- D. Society for Protective Coatings (SSPC) - Painting Manual. E. National Fire Protection Association, NFPA 251
- F. Underwriters Laboratories Inc. (UL) ANSI/UL263
- G. Association of the Wall and Ceiling Industry, AWCI Technical Manual 12-B, current edition.

1.3 SUBMITTALS

- A. Submittals for Review:
 - 1. Product Data: Manufacturer's data on materials proposed for use including:
 - a. Product designation and grade.
 - b. Product analysis and performance characteristics.
 - c. Standards compliance.
 - d. Material content.
 - e. Mixing and application procedures.
 - 2. Samples:

- a. 3 x 6 inch samples of each coating system on representative substrate. Step back successive coats so that all coats remain exposed. Indicate type of material used for each coat.
3. Fire Resistance Rating Listings: UL or other accredited testing agency indicating type and size of steel member to receive intumescent coatings and minimum dry thickness (mils) to achieve specified fire resistance rating.
4. Paint Schedule: Indicate types and locations of each surface, paint materials, and number of coats to be applied.

1.4 QUALITY ASSURANCE

- A. Applicator Qualifications: Minimum 5 years documented experience in work of this Section.
- B. Materials, Preparation, and Workmanship: Conform to MPI Painting Manual.
- C. Mockup:
 1. Construct mockup panels for interior and exterior wall finishes, 4 feet wide x full height.
 2. Show: Each color and texture.
 3. Locate where directed.
 4. Approved mockup may remain as part of the Work.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Container Labels: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage rates, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- B. Paint Materials: Store at ambient temperature from 45 to 90 degrees F in ventilated area, or as required by manufacturer's instructions.

1.6 PROJECT CONDITIONS

- A. Do not apply materials when surface and ambient temperatures or relative humidity are outside ranges required by paint manufacturer.
- B. Maintain ambient and substrate temperatures above manufacturer's minimum requirements for 24 hours before, during, and after paint application.
- C. Do not apply materials when relative humidity is above 85 percent or when dew point is less than 5 degrees F different than ambient or surface temperature.
- D. Provide lighting level of 30 foot candles at substrate surface.

1.7 MAINTENANCE

- A. Extra Materials: 1 gallon of each color and sheen.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Paint Manufacturers:
 1. Basis of Design: Sherwin Williams (www.sherwin-williams.com)
 2. PPG Paints (www.ppgpaints.com)
 3. Miller Paints (www.millerpaint.com)
 4. Benjamin Moore Paints (www.benjaminmoore.com)
- B. Substitutions: Not permitted.

2.2 MATERIALS A.

Paints:

1. As scheduled at end of Section, or approved substitute.
 2. Free from all forms of lead and mercury.
- B. Low V.O.C.: Maximum Volatile Organic Compound (VOC) Content for interior paints, coatings, and accessories, tested to ASTM D6886:
1. Primers: 100 grams per liter.
 2. Flat paints and coatings: 50 grams per liter.
 3. Non-flat paints and coatings: 50 grams per liter.
 4. Rust preventative coatings: 100 grams per liter.
 5. Dryfall coatings: 150 grams per liter.
- C. Gloss Ratings:

Gloss Designation	Units at 60 Degrees	Units at 85 Degrees
Flat	0 to 5	Maximum 10
Eggshell	10 to 25	10 to 35
Satin	20 to 35	Minimum 35
Semigloss	35 to 70	Gloss 70 to 85
High Gloss	Minimum 85	

2.3 ACCESSORIES

- A. Accessory Materials: Substrate primers, paint thinners and other materials required to achieve specified finishes; commercial quality.
- B. Patching Materials: Latex filler.
- C. Fastener Head Cover Materials: Latex filler.

2.4 MIXES

- A. Deliver paints pre-mixed and pre-tinted.
- B. Uniformly mix to thoroughly disperse pigments.
- C. Do not thin more than manufacturer's recommendations.
- D. Re-mix paint during application; ensure complete dispersion of settled pigment and uniformity of color and gloss.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Test shop applied primer for compatibility with subsequent coatings.
- B. Measure moisture content of surfaces using electronic moisture meter. Do not apply coatings unless moisture content of surfaces is below following maximums:
 1. Gypsum board: 12 percent.
 2. Wood: 15 percent, measured to ASTM D4442.

3.2 PREPARATION

- A. General:
 1. Protect adjacent and underlying surfaces.
 2. Remove electrical plates, hardware, light fixture trim, escutcheons, and fittings prior to preparing surfaces or finishing.

3. Correct defects and clean surfaces capable of affecting work of this section.
 4. Seal marks that may bleed through surface finishes with waterborne stain blocker.
- B. Impervious Surfaces: Remove mildew by scrubbing with solution of trisodium phosphate and bleach. Rinse with clean water and allow to dry.
- C. Uncoated Ferrous Metals: SSPC Method SP2 - Hand Tool Cleaning or Method SP3 - Power Tool Cleaning.
- D. Shop Primed Ferrous Metals:
1. SSPC Method SP2 - Hand Tool Cleaning or Method SP3 - Power Tool Cleaning.
 2. Feather edges to make patches inconspicuous.
 3. Prime bare steel surfaces.

3.3 APPLICATION

- A. Apply paints in accordance with manufacturer's instructions and MPI Painting Manual, Premium Grade finish requirements.
- B. Apply primer or first coat closely following surface preparation to prevent recontamination.
- C. Do not apply finishes to surfaces that are not dry.
- D. Apply coatings to minimum dry film thickness recommended by manufacturer.
- E. Apply each coat of paint slightly darker than preceding coat unless specified otherwise.
- F. Apply coatings to uniform appearance without laps, sags, curtains, holidays, and brush marks.
- G. Allow applied coats to dry before next coat is applied.
- H. When required on deep and bright colors apply an additional finish coat to ensure color consistency.
- I. Continue paint finishes behind wall-mounted accessories.
- J. Sand between coats on interior wood and metal surfaces.
- K. Match final coat to approved color samples.
- L. Where clear finishes are specified, tint fillers to match wood. Work fillers into grain before set. Wipe excess from surface.
- M. Finish concealed surfaces of exterior wood.
- N. Mechanical and Electrical Components:
1. Paint factory primed equipment.
 2. Remove unfinished and primed louvers, grilles, covers, and access panels; paint separately.
 3. Paint exposed pipe, conduit, boxes, metal ducts, hangers, brackets, collars, and supports unless factory finished.
 4. Paint exposed conduit and electrical panels in finished areas.
 5. Paint duct work behind louvers, grilles, and diffusers flat black to minimum of 18 inches or beyond sight line.
- O. **DO NOT PAINT:**
1. Surfaces indicated on Drawings or specified to be unpainted or unfinished.
 2. Surfaces with factory applied finish coat or integral finish.
 3. Architectural metals, including brass, bronze, stainless steel, and chrome plating.
 4. Acoustical insulation jackets for Mechanical equipment.
 5. Name tags or identifying markings on Mechanical and Electrical equipment.

3.4 ADJUSTING

- A. Touch up or refinish disfigured surfaces.

3.5 CLEANING

- A. Remove paint from adjacent surfaces.

3.6 PAINT SCHEDULE

- A. Types of paint listed herein are set forth as standard of quality and type of coating required for each type of surface.
 - 1. Paint exposed surfaces of types listed in Paint Schedule.
 - 2. Paint other exposed surfaces not specifically listed with not less than two coats of appropriate type of coating.
- B. Prime coat consists of touch up on shop primed and existing surfaces with intact coatings.

3.7 SCHEDULE - EXTERIOR SURFACES

- A. Existing steel guardrail posts:
 - 1. Sand & remove loose and flaking paint
 - 2. Thoroughly clean surfaces per manufacturer's specifications
 - 3. One coat zinc chromate primer.
 - 4. Two coats of alkyd enamel..
- B. Steel - Shop Primed:
 - 1. Touch-up with zinc chromate primer.
 - a. M01 Inorganic Zinc Primer by Benjamin Moore.
 - 2. Two coats of alkyd enamel, semi-gloss.

3.8 SCHEDULE - INTERIOR SURFACES

- A. Steel – Shop Primed:
 - 1. Touch-up with primer.
 - 2. Two coats of alkyd enamel, semi-gloss.

END OF SECTION

SECTION 221400 - FACILITY STORM DRAINAGE

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Storm water piping above grade.
2. Pipe hangers and supports
3. Deck drains.
4. Overflow drains.

B. Related Sections:

1. Division 01: Administrative, procedural, and temporary work requirements.
2. Section 024100: Selective Demolition
3. Section 033000 - Cast-in-Place Concrete.

1.2 REFERENCES

A. American Society of Mechanical Engineers:

1. ASME A112.21.1- Floor Drains.
2. ASME B31.9 - Building Services Piping.

B. ASTM International:

1. ASTM A74 - Standard Specification for Cast Iron Soil Pipe and Fittings.
2. ASTM D1785 - Standard Specification for (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120.
3. ASTM D2235 - Standard Specification for Solvent Cement for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe and Fittings.
4. ASTM D2464 - Standard Specification for Threaded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80.
5. ASTM D2564 - Standard Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems.
6. ASTM D2665 - Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings.
7. ASTM D2680 - Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) and Poly (Vinyl Chloride) (PVC) Composite Sewer Piping.
8. ASTM D2729 - Standard Specification for Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
9. ASTM D2751 - Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) Sewer Pipe and Fittings.
10. ASTM D2855 - Standard Practice for Making Solvent-Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings.
11. ASTM D3034 - Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
12. ASTM F477 - Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.
13. ASTM F679 - Standard Specification for Poly (Vinyl Chloride) (PVC) Large-Diameter Plastic Gravity Sewer Pipe and Fittings.
14. ASTM F708 - Standard Practice for Design and Installation of Rigid Pipe Hangers.

- C. Cast Iron Soil Pipe Institute:
 1. CISPI 301 - Standard Specification for Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications.
 2. CISPI 310 - Specification for Coupling for Use in Connection with Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications.
- D. Manufacturers Standardization Society of the Valve and Fittings Industry:
 1. MSS SP 58 - Pipe Hangers and Supports - Materials, Design and Manufacturer.
 2. MSS SP 69 - Pipe Hangers and Supports - Selection and Application.
 3. MSS SP 89 - Pipe Hangers and Supports - Fabrication and Installation Practices.

1.3 SUBMITTALS

- A. Submittals for Review:
 1. Per Section 013300.
 2. Shop Drawings: Not required for this project.
 3. Product Data: Submit data on deck drains, overflow drains, pipe materials, fittings, and accessories.
 4. Manufacturer's Installation Instructions: Submit installation instructions for material.

1.4 QUALITY ASSURANCE

- A. Perform work in accordance with manufacturer's installation instructions.
- B. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum three years' [documented] experience.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Protect piping systems from entry of foreign materials by temporary covers, completing sections of the Work, and isolating parts of completed system.

1.6 FIELD MEASUREMENTS

- A. Verify field measurements prior to fabrication.

1.7 WARRANTY

- A. Per Section 017000 requirements.

PART 2 PRODUCTS

2.1 STORM WATER PIPING, ABOVE GRADE – CAST IRON

- A. Cast Iron Pipe: CISPI 301 (Standard Specification for Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications), hubless, service weight.
- B. Fittings: Cast iron, CISPI 301 (Standard Specification for Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications).
- C. Joints: Neoprene gaskets and stainless steel clamp-and-shield assemblies.

2.2 STORM WATER PIPING, ABOVE GRADE -ABS

- A. ABS Pipe: ASTM D2680 (Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) and Poly (Vinyl Chloride) (PVC) Composite Sewer Piping) or ASTM D2751 (Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) Sewer Pipe and Fittings), Acrylonitrile-Butadiene-Styrene (ABS) material.

- B. Fittings: ABS.
- C. Joints: ASTM D2235 (Standard Specification for Solvent Cement for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe and Fittings), solvent weld.

2.3 STORM WATER PIPING, ABOVE GRADE - PVC

- A. PVC Pipe: ASTM D2665 (Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings) or ASTM D3034 (Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings) SDR 26, polyvinyl chloride (PVC) material.
- B. Fittings: ASTM D2665 (Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings) or ASTM D3034 (Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings),
- C. Joints: ASTM D2855 (Standard Practice for Making Solvent-Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings), solvent weld with ASTM D2564 (Standard Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems) solvent cement.

2.4 PIPE HANGERS AND SUPPORTS

- A. Drain, Waste, and Vent Hangers: Conform to ASME B31.9 and ASTM F708.
- B. Hangers for Pipe Sizes 2 Inches and Larger: Carbon steel, adjustable, clevis.
- C. Multiple or Trapeze Hangers: Steel channels with welded spacers and hanger rod

2.5 AREA DRAINS

- A. Basis -of-Design; Zurn Z100-C-R**
 - 1. Standard: ASME A112.21.1
 - 2. Cast iron body with 2-inch “no hub” outlet pipe
 - 3. Galvanized steel roof sump receiver assembly
 - 4. Round nickel-bronze strainer
 - 5. Adjustable under deck clamp
- B. Substitutions: per Section 016000**

2.6 OVERFLOW DRAINS

- A. Basis -of-Design; Zurn Z199-3IP-ZARB**
 - 1. Plain all bronze body “cow’s tongue” style
 - 2. 3-inch threaded inlet
- B. Substitutions: per Section 016000**

PART 3 EXECUTION

- 3.1 A. INSTALLATION – PIPE HANGERS AND SUPPORTS**
 - 1. Install according to [ASME B31.9] [ASTM F708] [and] [MSS SP 89].
 - 2. Support horizontal piping as scheduled.
 - a. Install hangers to provide minimum 1/2-inch space between finished covering and adjacent work.
 - b. Place hangers within 12 inches of each horizontal elbow.
 - c. Use hangers with 1 ½-inch minimum vertical adjustment. Design hangers for pipe movement without disengagement of supported pipe.
- B. INSTALLATION - ABOVE GROUND PIPING**

1. Establish invert elevations, slopes for drainage to ¼ inch per foot minimum. Maintain gradients.
 2. Install non-conducting dielectric connections wherever jointing dissimilar metals.
 3. Route piping in orderly manner and maintain gradient. Route parallel and perpendicular to walls.
 4. Install piping to maintain headroom. Group piping to conserve space.
 5. Group piping whenever practical at common elevations.
 6. Support cast iron drainage piping at every joint.
 7. Install piping to allow for expansion and contraction without stressing pipe, joints, or connected equipment..
 8. Provide clearance in hangers and from structure and other equipment for installation of insulation.
- C. PIPE HANGER SPACING
1. Pipe Material: ABS.
 - a. Maximum Hanger Spacing: 4 feet.
 - b. Hanger Rod Diameter: 3/8 inch.
 2. Pipe Material: Cast iron.
 - a. Maximum Hanger Spacing: 5 feet.
 - b. Hanger Rod Diameter: 1/2 inch.
 3. Pipe Material: PVC.
 - a. Maximum Hanger Spacing: 4 feet.
 - b. Hanger Rod Diameter: 3/8 inch.

END OF SECTION 22 14 00